THE BEST IN SCIENCE FICTION

WONDER Stories

July

A GERNSBACK PUBLICATION

HUGO GERNSBACK Editor

NRA

NEW YORK TO SYDNEY

25¢

"VOICE OF ATLANTIS"

by Lawrence Manning

FRENCH CLASSICS

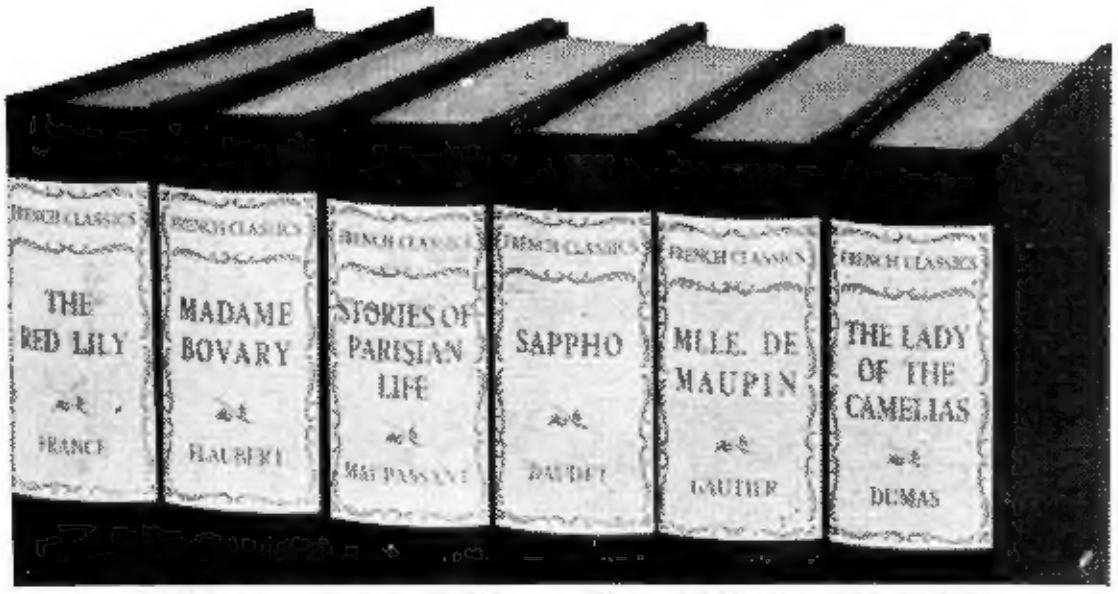
Daring . . . Romantic . . . Thrilling . . . Absorbing

A SET OF SIX FAMOUS BOOKS — *Former Price* $12.50

NOW ONLY $2.98

WHILE THEY LAST

Complete Set of Six Books



6 Volumes—Standard Library Size—1,447 Pages Bound in Rich Blue Linen-finish DeLuxe Cloth

6 Priceless Volumes

"Sappho" by Alphonse Daudet

"Mademoiselle de Maupin" by Theophile Gautier

"The Lady of the Camelias" by Alexandre Dumas

"The Red Lily" by Anatole France

"Madame Bovary" by Gustave Flaubert

"Stories of Parisian Life" by Guy de Maupassant

THE MOST FREQUENTLY QUOTED AUTHORS!

IF YOU WANT TO BE WELL READ — YOU MUST HAVE THESE CLASSICS IN YOUR LIBRARY

1,447 Pages of Love, Intrigue and Romance

Here are six famous French Masterpieces—collected together, translated into English, uniformly bound and made available in this special edition at an unbelievable bargain price.

Each one of these six books is the outstanding work of its author. Collectively they represent all that is best and most typical in French literature—written as only the French can write.

In times now past, various well-meaning but uninformed people have gone so far as to express the opinion that some of the incidents in these books were almost "shocking" and "risque", but such is decidedly *not* the case. True, the subject matter is handled with all the verve and fire for which the Parisian *raconteur* is famous, but it must be remembered that the French code is not the same as ours. Every nation has its own individual modes, manners and morals, which are bound to be reflected in its literature. Knowledge of these differences is of undeniable cultural value—and to censor them would be fortunately regarded as the height of prudery in this advanced day and age.

Stories that Vibrate with Human Passions

Seldom has such an amazing collection of tales been offered to the public—tales replete with intimate detail, unvarnished truths and daring incidents. Here you will meet a motley assemblage from the highest to lowest—true Parisians and Parisiennes, draining life to the final dregs, laughing, lying, loving, drinking, cheating, and *even killing!* Here you meet noble ladies, their fingers encrusted with jewels worth a king's ransom—*femmes de nuit*, haunting dim streets, their fevered eyes glowing beneath cheap finery—roues, rogues and vagabonds—priests and beggars, virgins and harlots—saints and sinners!

SPECIAL OFFER:

ONLY 230 SETS AVAILABLE AT THIS BARGAIN PRICE

of **$2.98** *per set*

Can only be shipped by express collect.

If you wish a set—Act now!

No C.O.D.—Money refunded if not satisfactory.

TRUTH PUBLICATIONS, Suite 926, Palmolive Bldg., CHICAGO, ILL. **WS-434**

Enclosed find my remittance of $2.98 for which ship to me by express collect, the set of six volumes of French classics as per your advertisement.

NAME ..... **ADDRESS** .....

CITY ..... **STATE** .....

WONDER STORIES *are everywhere*— If you know where to find them!

BELIEVE It Or Not, real wonder stories are going on day and night, and right now, more wonder stories are happening all around you than you will find in the pages of this magazine.

While you are reading this, music, speech, talk, which originated perhaps 12,000 miles away from where you are, is vibrating in your body, only you don't know it.

But the short wave fraternity all over the world knows this, and for a few paltry dollars they rig up in their own homes a short wave set which brings in stations from the Antipodes. Such sets cost as low as $7.20, believe it or not. So if you are looking for real wonder stories, they are in the making right along.

How can you listen to Sydney, Australia; to Berlin, to Moscow, London, day in and day out, at practically no cost at all? Just get the catalog, which is a veritable encyclopedia of facts, described below, and you will be writing your own wonder stories.

Here are a few samples of actual wonder stories told by actual listeners:

HOW IT WORKS!

I have constructed the OSCILLODYNE RECEIVER and boy! how it works!

The first day without any trouble I received Spain, England, France, and other foreign countries. Amateurs! why I never knew there were that many until now. With the one tube Oscillodyne, I bring in more stations on one plug-in coil than with a set of coils on different short wave sets.

IF ANY ONE IS TRYING HIS LUCK ON SHORT WAVE SETS, IT WILL BE WORTH WHILE TO CONSTRUCT THIS ONE TUBE OSCILLODYNE.

PAUL KORNEKE, JR. W. 8.
Pittsburgh, Pa.

FOREIGN STATIONS GALORE

It may interest you to know that yesterday, on my Doerle short wave set at 12:45 P.S.T., I heard CFH at Rio de Janeiro. They came in at 19830 Kc. and the announcing voice was as clear and strong as on an ordinary telephone.

I am using just 45 volts for both detector and audio stage on the plate. What it would do on 90 volts on the audio I do not venture to say.

At the moment 14.05 P.S.T., I am listening to phone from Japan to Hawaii. No station identification however. Around 16.000 K.C.S. KKD—Kaahuku Hawaii just identified his station.

HARRY V. DAVIS,
Penticton, B.C., Canada.

THE WHOLE WORLD

In the past two days I brought in with my Oscillodyne S-W Set the following foreign stations: 12RO, DJC (this with such volume that I was able to sing in the loudspeaker) and a French station which I was unable to identify, but I believe it to be FTA Pontoise, and also another German station which I have not been able to identify as yet.

On Wednesday RAQ was weak and noisy and DJC was loud and clear, but on Thursday the conditions were reversed. I have received many United States stations, such as W8XAA, W8XF, W8XK, W1XK, etc., etc.

In Short Wave Craft, this set was called A WONDER SET, and I certainly agree.

C. W. KNIERIM.
Hollis, L. I., New York.

Remember, you do not have to be a technician to receive stations from all over the world these days. We have solved all the technical trouble for you. Anyone can do it, and the cost is amazingly low.

FREE RADIO CATALOG . . .

1934 Edition

RADIO AND SHORT WAVE TREATISE

108 Pages • Over 100 Hook-ups
More than 1500 Illustrations

A VERITABLE TEXT BOOK ON RADIO

NOT JUST ANOTHER CATALOG

Every time a new edition of our RADIO AND SHORT WAVE TREATISE comes off the press it is an event—an event of importance to tens of thousands of our customers and friends who have been receiving them regularly for many years. YOU TOO WILL FIND IT INDISPENSABLE.

This completely revised and enlarged 1934 edition contains 108 solid pages of useful radio information, diagrams, illustrations, radio kinks and real live radio merchandise. It contains more valuable radio information—more real live "meat"—than many textbooks on the subject. As usual considerable space has been devoted to the beginner in radio. Chapter Two of the series of articles titled "Fundamental Principles of Radio for the Beginner," aside from being a fine grounding in the theory of radio for new fans, offers an excellent review to old timers.

If you have received copies of our previous editions, you are familiar with the type of book we publish—but this new edition WHAT A BOOK!

PARTIAL LIST OF CONTENTS

Chapter Two of "Fundamental Principles of Radio for the Beginner"—The New Tubes, Their Uses, and Their Fundamental Circuits—How to Make Money with Public Address Systems. How to Install and Maintain Them—How to Revamp Six-Volt Battery Sets to Use Two-Volt Tubes—Prize Winning Kinks and Short Cuts in Radio—How to Build the "B T" Beginner's Transmitter—How to Build the Famous Twinplex Short Wave Receiver—How to Construct an Amateur Radio Transmitter—A Most Modern and Complete Tube Chart Including Socket Connections for all Tubes—Numerous Free Offers, etc., etc.

WRITE TODAY Enclose 5c coin or U. S. Stamps for Treatise sent by return mail
Print name & address clearly on request

RADIO TRADING COMPANY 103-B HUDSON St. NEW YORK, N. Y.

Vol. 6, No. 2 | TABLE OF CONTENTS | July, 1934

WONDERS OF AUTOMATISM an editorial *by Hugo Gernsback* 133
ENSLAVED BRAINS *by Eando Binder* 134
(In Three Parts—Part One)
VOICE OF ATLANTIS *by Laurence Manning* 156
SCIENCE-FICTION an editorial 173
A MARTIAN ODYSSEY *by Stanley G. Weinbaum* 174
ROCKET SHIPS a news article 190
A HAIR-RAISING TALE a short-short story *by W. L. Sheppard, Jr.* 191
FORTHCOMING STORIES 193
THE LAST SHRINE *by Chester D. Cuthbert* 194
DRUSO *by Friedrich Freksa* 210
(In Three Parts—Conclusion)
WHAT IS YOUR SCIENCE KNOWLEDGE? 235
BOOK REVIEW of "After Worlds Collide" *by Edwin Balmer* and *Philip Wylie* 238
MOVIE REVIEW of "The End of the World" a French production 238
SCIENCE QUESTIONS AND ANSWERS a monthly department 239
THE SCIENCE FICTION LEAGUE a monthly department 241
THE READER SPEAKS—Letters From Readers 243

ON THE COVER this month we see a conception of the city of the far future, with which the inhabitants of ancient Atlantis were in constant communication across the veil of time. (From "Voice of Atlantis" by Laurence Manning.) Cover by Paul.

Published by Continental Publications, Inc. H. Gernsback, President; L. S. Manheimer, Secretary. Publication Office, Myrick Building, 29 Worthington Street, Springfield, Mass. Editorial and General Offices 99 Hudson St., New York, N. Y.

WONDER STORIES—Monthly—Entered as second-class matter at the post office at Springfield, Mass., under the Act of March 3, 1879. Title registered U. S. Patent Office. Copyright, 1934, by Continental Publications, Inc. Text and illustrations of this magazine are copyrighted and must not be reproduced without permission of the copyright owners. WONDER STORIES is published on the first of the preceding month. 12 numbers per year. Subscription price is $1.50 a year in United States and its possessions. In foreign countries, exclusive of Canada, $2.00 a year. Single copies, 25c. Address all contributions for publication to Editor, WONDER STORIES, 99 Hudson St., New York. Publishers are not responsible for lost MSS. Contributions cannot be returned unless authors remit full postage.

WONDER STORIES is for sale at principal newsstands in the United States and Canada.
IF YOU WISH TO SUBSCRIBE to WONDER STORIES, make out all remittances to the Continental Publications, Inc. Be sure to mention the name of magazine you wish to subscribe for, as we are also agents for the following magazines: RADIO-CRAFT and EVERYDAY SCIENCE AND MECHANICS, subscription price of which is the same as WONDER STORIES. Subscriptions can be made in combination with the above publications at a reduced club rate. Ask for information. Subscriptions start with current issue unless otherwise specified.
WHEN YOUR SUBSCRIPTION EXPIRES, we enclose a renewal blank in the last number. No subscription continued unless renewal remittance is received.
CHANGE OF ADDRESS. Always give us old as well as new address and notify us as far in advance as possible.

Chicago Advertising Representative—L. F. McClure, 919 North Michigan Ave.
Western Advertising Representative—Lloyd B. Chappell, 511 So. Alexandria St., Los Angeles, Calif.

London Agent: Hachette & Cie., 8 La Belle Sauvage, Ludgate Hill, E. C. 4
Paris Agent: Hachette & Cie., 111 Rue Reaumur
Australian Agents: McGill's Agency, 179 Elizabeth St., Melbourne

There are many new
POPULAR EXPERIMENTS
in the July issue of EVERYDAY SCIENCE AND MECHANICS

You will get quite a "kick" out of making new apparatus for chemical and physical experiments, from the clear detailed plans given in this issue of "Everyday Science and Mechanics" Magazine. You will get even a greater thrill from carrying on the experiments thus made possible and from the many demonstrations you can give to your friends.

In this big illustrated monthly there's plenty of construction articles for the home workshop.

WE DO not hesitate to say that EVERYDAY SCIENCE AND MECHANICS is the finest *scientific-technical - mechanical - constructional* magazine in the field. Right up-to-the-minute with news flashes of scientific events from all parts of the world. Dozens of constructional articles for making useful things for the shop, garden and home. Many ideas from which you can make things to sell.

Get this magazine at your newsstand today and after reading your first issue, you'll agree with us that EVERYDAY SCIENCE AND MECHANICS is all that we claim it to be, and better.

A host of interesting scientific subjects

Odd and unusual experiments
How to make a combustion tube furnace
Experiments with a combustion tube furnace
Minerals under the microscope
Covers and observatories for the telescope
New tools you can easily make
Pressure casting for the amateur
Making lawn ornaments with the jig-saw
How to make a dulcimer
Bicycle wheel band saw
Bird houses you can make
Mechanics of magic
Other experiments and wrinkles

AVIATION
WOODWORKING
ASTRONOMY
PATENTS AND INVENTIONS
BOOK REVIEWS
NEW DEVICES
CONSTRUCTION
METAL WORKING
CHEMISTRY
ENGINEERING
MICROSCOPY
PHOTOGRAPHY
RADIO
ELECTRICAL EXPERIMENTS
HOUSEHOLD AND SHOP HINTS
AND OTHERS

Over 150 Illustrations, 4-Color Cover —9 x 12 Inches

Special! OFFER

$2.00

FOR ONE YEAR

MAIL THIS COUPON TODAY

EVERYDAY SCIENCE AND MECHANICS WS-734
99 Hudson Street, New York, N. Y.

I enclose herewith $2.00 for which you are to enter my subscription to EVERYDAY SCIENCE AND MECHANICS for one year.

Name .....

Address .....

City ..... State .....

(Foreign or Canadian subscriptions not accepted at this rate.)

STELLAR PUBLISHING CORPORATION
99 Hudson Street, New York, N. Y.
I am enclosing herewith my remittance of $..... for which you are to send me the numbers of books in the SCIENCE FICTION SERIES which I have circled below, at the price of 10c each or Six Books for Fifty cents. No less than three books are sold. Send remittance in check, stamps or money order. The numbers of the books that I want are circled below.

13 14 15 16 17 18

Name .....
Address .....
City .....
State .....
WS-734

6 New Titles HAVE BEEN ADDED TO THE SCIENCE FICTION SERIES

CLIP COUPON AND MAIL

10c EACH OR 6 FOR 50c

THE increasing demand by our readers for new titles to be added to the SCIENCE FICTION SERIES has now been met. Six new books have been published and are now ready. Many new authors have contributed excellent stories which you will enjoy reading. A short summary of the new titles will be found below.

These new books, as usual, are printed on a good grade of paper, and contain brand new stories never published before in any magazine.

Each book (size 6 x 8 inches) contains one or two stories by a well-known science fiction author.

The Titles Are:

13—MEN FROM THE METEOR
by Pauzie E. Black

In the unexplored heart of Australia lay the bizarre and cruel civilization of the meteormen. And into their midst came the two men from Outside, to pit their puny strength against the meteormen's power.

14—THE FLIGHT OF THE AEROFIX
by Maurice Renard

Renard is the H. G. Wells of France. With sly humor and yet grim reality he describes the most unusual and startling flight made by man. An entirely new type of transportation dawns upon the world in this masterly story!

15—THE INVADING ASTEROID
by Manly Wade Wellman

Into the vision of the Earth swam the huge but innocent asteroid. Mars, at death grips with the Earth, was far away; but the asteroid loomed ominous, menacing. Two men were delegated to solve the mystery; and what they found is revealed in this startling story.

16—IMMORTALS OF MERCURY
by Clark Ashton Smith

Under the sun-parched surface of Mercury, we follow in this story, the experiences of a man, reminiscent of Dante's Inferno. Every force of grotesque nature, the bitter enmity of the Immortals track him down in his wild escape to the surface.

17—THE SPECTRE BULLET
by Thomas Mack
and
THE AVENGING NOTE
by Alfred Spriesler

are two surprises for the lovers of scientific detective mysteries. Death strikes suddenly in these stories; clever scientific minds and cleverer detectives are pitted against each other in a duel with Death.

18—THE SHIP FROM NOWHERE
by Sidney Patzer

A trip to infinity is this unusual story: a mad chase across the infinite emptiness, tracked always by the avenging Marauder. Here is a story that deals with millions of years and billions of billions of miles.

STELLAR PUBLISHING CORPORATION
99 Hudson Street **New York, N. Y.**

VOLUME 6
No. 2

WONDER Stories

JULY
1934

. . . . Prophetic Fiction is the Mother of Scientific Fact . . . .

HUGO GERNSBACK, *Editor-in-Chief*
CHARLES D. HORNIG, *Managing Editor* FRANK R. PAUL, *Art Editor*
C. P. MASON, *Associate Editor*

WONDERS OF AUTOMATISM

By HUGO GERNSBACK

FEW things are so enormously complex as animal "automatic" actions, and a huge library could be printed on this subject alone. In the classification of automatic actions, which are continual with us, such as those made by force of habit, those of instinct, those of reflexes, etc., may be put all which take place subconsciously, and for which the normal thought is not required in their execution.

For instance, you feel thirsty. You get up from your chair; you walk to the nearest faucet; you take hold of a glass tumbler; then you open the water faucet and let the water run into the glass until it is full. Then you shut off the water; after which you bring the glass to your lips and drink. Simple as the procedure is, there are several dozen actions in this "simple" automatic performance. In each case, the corresponding nerve center must get an order, which must be executed. Your muscles must respond, in order to lift you from the chair when you get up. Your legs must start to walk. Other commands must be given, as to what direction you shall walk in. If there is an obstruction—a desk or a chair—more commands must be given, so you will walk around it instead of bumping into it. When you come to the faucet, your feet must stop; if not, you will walk into the water cooler. You can carry on from this point; and it is easy to see how many more commands by the nerves must be executed by the muscles before you finally drink the glass of water.

This is an everyday, common activity, but exceedingly complex. If he were to try and reproduce the same actions in a robot machine, it would take an inventor many years to construct a model that could make all the motions of this so-called simple act of drinking a glass of water. I have purposely chosen a simple one; because far more complicated activities can be depicted by every one quite readily. Thus, for instance, the stenographer who operates a typewriter and writes wholly automatically, never looking at the keyboard; the piano player who reads the notes, reads the music's words and plays without ever being conscious of a keyboard at all; etc., etc.

Into the same category fall the actions produced by instinct which governs, for instance, the entire lives of insects who do practically every act in their whole existence without conscious thinking. It is as though the insect had been trained to do certain acts, in which it takes no conscious part itself; everything being performed automatically by that mysterious power which, for lack of a better term, we name instinct. In the human being, or in the trained animal, automatism is acquired or "conditioned." It comes only by habit. You cannot operate a typewriter or other keyboard machine unless you have learned it by practice. You cannot even get a drink from the water cooler unless you have been taught from infancy how to perform the associated actions. In the insect world, this condition does not prevail; here instinct and habit are INBORN and require no teaching. The young queen bee can lay sufficient eggs to start a new colony. If those eggs are segregated, where no live bee ever comes near them, in time they will hatch out; and the young bees will function just as though they had known all their lives all the business of social organization, of making their marvelous honeycombs, and performing all other duties of a normal beehive. The same is the case with ants, termites, and all other insects who can carry on automatically from birth in the same manner as their grown forebears have always done.

Human beings are not so fortunate. Everything must be learned over again before automatism is acquired.

(Illustration by Paul)

Williams looked out to see a strange new world. The New York skyline had become weird and incredibly changed.

ENSLAVED BRAINS

By EANDO BINDER

PART ONE

● Our author, who is fast becoming one of your favorites, presents here one of the most vivid, logical, living novels of the future that we have ever seen.

We are shown the effects that the civilization of 1973 would have on a man lost in the jungles and isolated from the world for forty years. Wonders surround him on every hand.

But Unitaria, the world of the future, is not all Utopia. The government scientists have instituted several terrible things—things that stagger the imagination.

How the conditions of 1973 affect Williams makes this a thrilling, active, breath-taking story from the first page to the last.

● "There's my ship," said Earl Hackworth, pointing down into a long barren valley which they viewed from the top of a tumbled rock ridge. "Isn't it a wonderful sight in this primeval country? —like a jewel in a setting of lead."

The man spoken to bent blue eyes on the object which indeed glinted like a fiery gem in the strong sunlight, but made no answer. Then he turned his eyes to all the countryside. Far to the back was the green of jungle, spreading eagerly to right and left without end—the cruel, hot jungle which it had taken them three agonizing weeks to traverse. It seemed to crouch like a savage beast, relentless, waiting. It hurled defiance to man, but man had won. From its edge to where the two men stood was a sickly stretch of scrubland, accursed by nature, avoided by even the lowly snake. It had been hot like the inside of a furnace and deceptively long. It had seemed to mock their dragging limbs and vanishing water supply. Even the jungle was better.

But that was all over now, the man with the blue eyes reflected. Jungle and waste had been crossed and conquered. Danger and suffering had buffeted them and left them weaker in body but stronger in spirit. Before them was but a short trip to the bottom of the valley of naked sand. Then a man-made thing, an incredible marvel in aboriginal Africa, would take them up and away, away from feverish lowland jungle, from heartless scrub wastes. It would pick them off the ground and drop everything below into a memory.

"I say, Williams," spoke Hackworth again. "How do you like my ship?"

The man Williams looked again, parted his lips and twitched a slow tongue that seemed undecided what answer to make. "Your ship!" he said, his eyes unfocusing with inward concentration.

"Yes, the ship I told you about," Hackworth said. "The ship that will take us to the coast, and will take *you* from a ghastly exile. Now that ship down there is what is called a 'Sansrun,' or helicopter airplane. It can rise vertically, not like your 1933 airplanes, Williams, that had to run along the ground for a few hundred yards. Do you understand, old boy, or do I still talk too fast?"

"I can . . . . understand," Williams said. The words came slow and precise.

"Good," Hackworth said. "In another few weeks you won't have any trouble with the language at all. Forty years is a long time . . . .

"But rather than talk aimlessly up here, let's get the boys together and finish our trek. We've all had a good drink of water. Two hours and we'll be there. You call 'em, Williams. You speak their garbled Bantu better than I ever hope to. Just two more hours and then — 'farewell to Africa, jungle, and sand.'"

But the man Williams made no immediate move to call the "boys," or native *safari* men. Instead, some strong emotion flooded his face. Even his superb tan, that had darkened his white skin to a coffee color, could not hide an odd expression of dismay, almost of fear.

"What's the matter, Williams?" Hackworth asked sharply, laying a hand on his shoulder.

His blue eyes glazed for a moment in strong feeling; Williams evasively muttered to himself in native dialect.

"Listen here!" cried Hackworth fiercely, tightening his fingers on the other's shoulder. "Out with it. Something's bothering you."

Williams ceased his muttering then and turned an agonized face to his companion. When he spoke, his voice was high and jerky. His throat muscles worked spasmodically.

"I can't do it! . . . . Africa, Olgor . . . . it belongs to me . . . . I belong to it! *Musri et kraal* . . . . How can I leave my home?"

For a moment, Hackworth was thunderstruck, speechless. He stared at the brawny Williams and saw handsome features tightened with inner pain, with mental distortions. Was this the Williams of his boyhood? Could this man have once been his eager, joyous cousin? Or was this all a mad dream—a spell of magic Africa?

Hackworth swept his brow clear of perspiration and his mind of feverish obsession. He stretched forth both his hands to the other, grasping him by the shoulders.

"Good Lord! You *don't* belong here," he said firmly. "Think, Williams; you are a white man, as I am. You are my cousin; you were born far from this continent of mystery and misery. You are a virtual exile here. The civilization of the white man, your natural heritage, calls you—"

"I'm afraid!" cried Williams suddenly. "Forty years of this . . . . I'm afraid to go back!"

Hackworth shook him, none too gently.

"Afraid? *Afraid!* Of what?" he roared.

Williams gulped before he spoke. "Civilization . . . . I wouldn't fit . . . . I'm only a white man by birth . . . . at heart, after these forty years, I'm like our *safari* boys . . . like faithful M'bopo—"

"Dan!"

It was just a name, a word wrung out of Hackworth by his cousin's emotional outburst. Yet that name had power. It suddenly rolled the mists of dusty time away from the memories of youth in Williams' mind.

"Dan!" continued Hackworth eagerly, seeing that he had fanned a spark. "Dan, you remember?—kids in Baltimore—how we played together, fought together; we were pals . . . . Dan, how can you say you belong to Africa?"

The blue eyes glistened from inner revelation, looking back upon a life that had been buried under a landslide of later impressions. Williams threw off his nostalgia for Africa and smiled weakly.

"Of course you're right. I'll go talk to the boys and start them off."

As Williams left with a firm step, Hackworth reflected that not till that moment had either of them really realized who they were and what they were to each other. "Hackworth" and "Williams" they had called each other, as distant as strangers. Forty years of Africa had set up a barrier between them. Only that magic name, that timely cry of "Dan!" had pierced the wall of time.

● With a flood of native dialect, Williams got the *safari* men started with their heavy packs. Down the winding trail of crumbling sandstone, the party made its way. The two white men brought up the rear with rifles. A new eagerness had come into all of them, tired though they were from the three-week trek from wildest Congo. The spearing glint of the airship in the bottom of the valley promised rest and ease. They would reach it before sundown. Back of them the upflung ridge of wind-worn rock blotted out the jungle.

Dan Williams had left the United States in 1933 with his father, on an exploration into the Congo. He was then a

lad of eighteen, but already full-grown and dependable. The elder Williams had had two purposes in mind: to penetrate the jungles just above the northern bend of the Congo River, and to find some trace of a previous expedition which was said to have gone in there and never returned. Both success and failure came to them. They came upon Pierre D'Lawoef, sole survivor of the other expedition, dying from knife wounds, in the hands of friendly Bantu natives.

D'Lawoef told a dreadful tale of savage Zulus, a wandering tribe from the south, attacking and destroying his five white companions and many black boys. He himself had managed to escape and lived with unwarlike tribes for eight years. The Zulus had apparently left. But just before the Williams' expedition had come, the blood-thirsty Zulus had again reappeared and given the Frenchman his death wounds.

The elder Williams began to fear for his own party's safety, and after the burial of D'Lawoef, gave the order to retrack back to the Congo River. Then it had come. Screaming Zulus with hideous painted faces had puffed out of the jungle and attacked with kris and spear. Rifle fire drove them off only after three of the white men and a dozen *safari* boys had been killed outright, and the others had been wounded in greater or lesser degree.

Dan Williams, a mere boy, had seen all this and not long after saw the remaining white man die of infection. Months after, his father died of fever, induced by his weakened condition. The kindly Bantu natives then adopted the orphan white boy and time had flown swiftly.

Forty years of Africa had made him a native in all but birth. He became as much a child of nature as the Bantus, and came to exceed them in both physical and mental exploits, so that for thirty years he had been unquestioned patriarch of the tribe. He thought of reaching the Congo River and civilization more than once, but the southern lands between had filled with Zulus, enough of them to prevent his ever crossing a mountain pass which was the only reasonable connection with the Congo valley.

The ever-present threat of Zulu attack aroused his fighting instinct. Under his guidance, the Bantus were trained in simple warfare, and the Zulus soon came to respect his tribe which, though they had only bone and flint weapons, fought like demons under the leadership of a clever general.

Thus had Dan Williams spent a lifetime in Africa.

Then had come an echo from the dim past. A lone white man and his native *safari* had come from the north. This white man talked patiently and stirred the jellied contents of the pot of the past. Then he had embraced him and called him "cousin." And gradually Dan Williams had recognized his strange words.

Earl Hackworth had made three efforts in those forty years to find out what had happened to his uncle and cousin. The first two had failed by reason of the Zulu threat. The third had succeeded only after careful planning and mapping, discovering a northern route free of the Zulu menace.

Hackworth had found his cousin to be a tall and amazingly strong man whose elastic step and youthful poise belied the fifty-eight years of his age. Despite a dark brown skin, scraggly bleached hair, and unkempt beard, Dan Williams had immediately struck him as virile and sternly handsome. Decidedly, he was a man of men, a mass of muscle that had not yet succumbed to the senility of old age.

Hackworth, overjoyed that he had found at least one of his blood relatives alive, had immediately planned the return. Williams had appeared hesitant at first and then agreed. But all during the three weeks' crossing of the jungles and wastes, he had been moody and taciturn. Hackworth attributed it to his African environment, but the truth was that Williams had been in a bewildered dream. His mind had not fully grasped the truth till that cry of "Dan!" had swept away the fogs of forgotten things.

And with that word had Dan Williams severed his last connection with Africa. From then on, the forty years' life in the Dark Continent became just an interlude in his mind, a desert between two oases, He was going back to the white man's world and take up the white man's ways.

When they were within a mile of the ship, two tiny black dots separated from the bulk of the airship and waved thread-like arms.

"My two guards," explained Hackworth, brandishing his gun in return. He had left two black boys armed with pistols to watch the ship. As a second safeguard, he had landed it in the valley, completely hidden from view of the wasteland level. He had taken no chance that wandering natives might find an unguarded, easily seen ship and damage or plunder it during his absence.

They reached it just as long evening shadows began to crawl with dark fingers across the valley floor. Hackworth shouted orders to the *safari* men in distorted dialect, helped now and then by Williams who would translate English phrases that the former hurled to him. Before the sudden tropical darkness had overtaken them, they had stored most of their supplies in the roomy hold of the rear fuselage.

"We'll start at daybreak," Hackworth shouted to the natives. "Make supper tonight with anything you please and then get to sleep."

With an answering shout of joy in anticipation of a delectable meal and hearty sleep, the black boys set up their tents and built a fire.

Dan Williams looked over the airplane with an eager eye. Compared to the craft he had known of forty years before, this one seemed a monstrous distortion. Incredibly long and broad wings stretched from an ovular fuselage. In fact, to Williams it seemed practically all wings. Two mighty engines with long four-bladed propellers were set at about the mid-point of each wing. The ovoid fuselage bore a large window at the nose. From close up, it looked ungainly and ugly. Yet Williams remembered that from the ridge top through binoculars it had looked graceful and light, like a poised dragon-fly ready to spring enthusiastically into the air.

"You call this a helicopter," Williams said when Hackworth had finally arranged things satisfactorily in the hold. "But I can't figure out what makes it rise vertically." He spoke in a slow, measured voice, for as yet English was laborious for him, his tongue having rolled off guttural Bantu dialect for forty long years.

● Hackworth chuckled. "What makes it go up, eh? Well, Dan, things have changed a lot since 1933. This is a 1973 model. Now look at the engines. See the cradle they're in? At the flip of a lever in the pilot seat, the engines swing upright so that the propeller is nearly horizontal. Then they act as upward pulling screws. Of course, the wing design and draft deflectors are engineering developments never thought of in 1933. They make it possible for a heavy all-metal ship like that to rise vertically. Without cutting engine speed, the pilot swings the engines horizontal when the ship has gained sufficient altitude to clear obstructions."

"Do you own . . . . the whole thing?" asked Williams.

"Sure. Why do you ask?"

"It looks expensive. You must have made a small fortune . . . . back home. Our families were never rich. My father could never have gone on his exploration without the Belgian Government standing all expenses."

"I'll explain how it is that I own that 'expensive' thing some other time," returned Hackworth with a short laugh. "Without knowing the conditions of 1973, you would not understand.

"By the way, that rawhide bundle of yours; if it has anything fragile or precious in it, you'd better take it into the cabin with you. Otherwise I'll put it in the hold."

"In the cabin," said Williams quickly.

He muttered to himself as he picked it up from the sand and carried it into the cabin. Hackworth pointed to a ceiling

rack which already held a medical kit and several cartons of matches.

"And tomorrow," Hackworth said, "you're going to dress in civilized clothes. Those loin skins may look right to your Bantu friends, but they would look like hell on the coast."

Williams looked down at his practically naked body, and then raised amused eyes to his companion.

"Right you are. And I'm going to . . . . to . . . . yes, shave also."

With a hearty laugh, Hackworth, pleased to find his cousin fast becoming culture-minded, linked his arm and pulled him to the fire. They partook of a delicious stew of broiled meats and vegetables in the soft blackness of a moonlit night and listened to the chattering of the natives for a while before retiring. Then they crawled into Hackworth's tent.

Williams found it hard to sleep, despite aching muscles. Tomorrow he would see the coast and glide into civilization. Forty years—1933 to 1973! How much different would things be? What strange things had come to pass in that time? He got up once and breathed deeply of the night air. Africa; it was all around him, revealed in the silvered shafts of moonlight. His mind visioned what he could not see—desert, wasteland, jungle, fertile river areas, the village of his simple Bantu friends. He waved an arm in farewell. "*Akka musri et kraal umo*—farewell to my home that was," he said.

Then he crept back to the side of the snoring Hackworth.

In the light of a newborn sun, the camp was quickly broken up and all stored away in the ship's hold. The coast pilot whom Hackworth had hired at Kabinda, a tall mulatto, went busily about the ship, inspecting everything thoroughly preparatory to the departure.

Hackworth called to him the three Bantus who had accompanied the party from Williams' tribe. They had cut down the return trip by several days with their knowledge of shorter trails. To them he handed a number of trivial articles—mirrors, combs, and colored beads—and as a gesture of great gratitude, presented a pair of binoculars to M'bopo.

The latter, who had been quite attached to Williams, stared dumbly at the glasses turning them over and over.

"Goodbye, M'bopo," said Williams in dialect. "May the spirits honor and cherish your prosperity in the years to come."

Hackworth looked on curiously, for he could detect some sort of deep feeling between them.

M'bopo, a wiry little soot-black man of thirty whose sleek body fairly writhed with muscle, suddenly dashed the binoculars to the ground so violently that a lens burst and scattered. In another moment he was kneeling before Williams and crying over and over: "*Umo ishta umi*—take me with you!"

Williams looked appealingly to Hackworth, with something like a tear forming in his eyes. Hackworth nodded in understanding.

Williams exchanged several rapid phrases with the black, pulling him to his feet. Then he turned to Hackworth.

"He says that he wants to go with me no matter if it be to the Seven Hills, which to the Bantus is equivalent to the end of space. If it's all the same to you, Hackworth—"

Hackworth hesitated but the fraction of a second, thinking of an ignorant negro in the supercivilization of America. Then he said, "Plenty of room for him, Dan."

M'bopo performed a most amazing trick even before Williams verbally told him he could go along, having seen the agreement in the white men's faces with quick eyes. He leaped high into the air, turned his body around on its vertical axis once, and slapped the soles of his feet together—all before landing again.

"He was the moon-dancer," explained Williams, seeing the astonishment in Hackworth's face at the feat. "Some of his acrobatic tricks would make you believe he was a wizard. Clever fellow. Very attached to me. I am hardly sorry he asked to come along."

Hackworth shrugged his shoulders and shouted for the men to board ship. Like

a swarm of black hornets, screaming in childish joy, the natives scrambled into the ovoid. It was plain to see that they considered the ride to the coast in an airplane the greatest of all great things. When they were all in, arranged on the benches by the aloof, English-speaking pilot mulatto, the two white men and M'bopo entered. Hackworth pointed to a bench facing the front window, just back of the pilot seat.

Williams looked around at the simpleness of the cabin while the pilot warmed up the engines. It was roomy and bright with the light that streamed in from the front. The benches had soft woolen cushions and were form-fitting and delightfully comfortable. Broad straps came around one's thighs.

At a signal from Hackworth, the pliot moved his hands on the controls. The ship trembled as the engines throbbed to high speed and gently rose, so gently that Williams was shocked to see the ground far below a moment later. Up and up it went as though pulled by some cosmic winch and chain. Then the tone-beats of the engines changed their howls as the pilot swung them to a horizontal pitch. With a pleasant surge, the airplane leaped forward. Below, the African topography blended into a flowing panorama.

Williams, with his eyes peering around in fascination, muttered to himself in Bantu dialect. Within him, two separate beings seemed to occupy his mind jointly. His white man's soul tried to be nonchalant; his native superinduced temperament trembled. He realized that it might be days, perhaps weeks, before he could be free of Africa and its subtle influence.

CHAPTER II

The Return to Civilization

● "Well, Dan, old boy, what do you think of the 'hyp-marine'?"

"Wonderful!" returned the other, looking down at the tumbled ocean surface. "But it doesn't have any decks. I don't like the idea of being cooped up in our little room here for several days. Give me the old-time ocean liners with a promenade where one could breathe fresh salt air."

Hackworth smiled. "Several days, you say. Dan, we'll be in New York in *twenty hours!* You forgot this is 1973. Our speed, constant and unvarying, is 300 miles an hour!"

"Impossible!" spluttered Williams aghast. "Six thousand miles in twenty hours?"

"What would you say if I told you that it is possible to cross from Europe to America in *two hours* — by means of stratosphere rocket ships?"

Williams relapsed into amazed silence.

It was the second day after the departure from interior Congo.

Hackworth had paid off his *safari* men at Kabinda on the coast—a very modern and important African port—and had arranged to have his airplane shipped to South America. He was a professional explorer, which strain had run in his and Dan's line for many generations. His next expedition would take him into the Amazon region.

Obtaining passports for Williams and M'bopo at Kabinda, and certain other matters, had taken up much of their time. There had been little chance for conversation, beyond a résumé of family affairs. From this Williams had heard that the last remaining member of his family, his sister Helen, had died five years before. Hackworth, and the daughter that had been born to him, were his closest relatives.

Hackworth had bought tickets on the hyp-marine for quick passage to America. Williams first glimpsed the ship from the top of a hill in the city a mile from the dock. At first glance it looked like a snub-nosed submarine, but there were noticeable differences: it had wings, short and stubby, at rear and front; along its upper length were spaced ten giant engine-housings from which protruded four-bladed propellers; and there were hundreds—no, thousands of tiny round spots running in lengthwise rows, gleaming with the iridescence of heavy glass. It rested high

and dry on a runway of rails at the end of the huge dock. In size it was much smaller than a 1933 ocean liner, but carried twice as many passengers.

The departure from port had been a great thrill to Williams and his Bantu friend. First there had been the deep hum of the air engines above, gradually climbing the harmonic scale. Then with a slight jerk, the ship had moved from its berth and slid along the runway. There had been a sinking sensation and the sound of lapping water, followed by a deep-throated roar from above. For many minutes, the ship had swayed and rocked. Then gradually a smoothness had come over the ship's motion and Williams had seen the ocean surface recede till not even the highest waves touched them. In a half-hour, the motion of the craft had become uniform and unfelt, and the noise above had become a muffled drone. At the constant height of a hundred feet above water level, the hyp-marine skimmed the ocean like a preying gull.

The ship's interior ran in lengthwise tiers, each composed of five rows of rooms with suitable corridors in between. The price for a room against the hull, and therefore having a round window from which one could view the seascapes, was double the price of any interior room. But in comfort and elegance they were all uniform.

Hackworth and his two companions had a room for three, with three beds, three leathern seats, sundry decorative articles, and one mirror. In this mirror, Williams had surveyed himself in amazement. Clean-shaven and scrupulously clean, he did not look at all the wild image reflected in still African pools. His fine straw-yellow hair offset a healthy tan and sturdy features handsomely. Not one in a million would guess his age. He looked like a man in his prime, and he felt that way too, he reflected with secret pride.

Clothing styles had not changed much with men, except that the old tight collar had disappeared entirely, leaving the neck open. The suit that Hackworth had helped him purchase at Kabinda was of a dull red color. M'bopo had been outfitted with a soft green. But he had donned civilized clothing only after his master had threatened to send him back to the Congo otherwise. Hackworth himself had dressed in a suit of sky blue. Williams had become used to seeing colorful clothing, for all the white men at Kabinda had worn them. It was the height of fashion.

M'bopo, about whom both the white men had had misgivings, proved to have an adaptive temperament. His eyes were constantly rolling in wonder at the things he saw for the first time, but his inscrutable features gave hardly a sign. He was as silent as an English butler and not in the least troublesome. For him it was enough that "Orno Akku" (The White Orphan) was near him. He wanted nothing more than simple food and a place to sleep. Since he knew no English and would make no unnecessary sound in their presence, Hackworth came to forget him as though he did not exist.

The transatlantic trip was punctuated only by several meals in the huge public dining cabin, and for the rest of the time they were able to indulge in grateful sleep. The three-week trek through steamy, miasmic jungle had sapped their strength; they felt it now in their extreme lassitude.

It was not an hour after they had left port that Williams turned away from the window to face Hackworth, who was already undressing for bed. He saw worry in his face. Early that morning while yet in Kabinda, Hackworth had received a radiogram. Upon reading it, he had turned pale and contracted his brows fiercely. He had vouchsafed no information about it and hastily stuffed the message away. Williams had wondered, for the look of worry had grown deeper.

Williams rose from his seat and stood over Hackworth.

"Something is bothering you, Earl .... that radiogram?"

Hackworth started at mention of the message. His face became suddenly haggard.

"Oh, just something personal, Dan. Won't concern you directly."

Their eyes met.

"Wouldn't it be better if you unburdened yourself?" asked Williams quietly.

Hackworth fumbled with a shoe-lace in hesitation and then motioned to the chairs. They sat down facing each other.

"Dan, as I've mentioned before," began Hackworth, "I have a daughter, a dear sweet girl of twenty, whom you've never seen, of course. The radiogram was from her. In it she told me that the thing we've most dreaded has finally happened. She has been summoned by the Unidum to leave our home and . . . . and become the wife of a man she has never met and whom she . . . . she doesn't love, because she loves another."

"Unidum? . . . . leave home? . . . . Marry a man she has never met?" queried Williams perplexed.

Hackworth shifted his position to look out at the limitless sweep of ocean and sky.

"To make it clear to you, Dan, I'll have to do a little explaining. We have a new government today in 1973 called the Unidum, a sort of combination democracy and dictatorship, with a capitol in New York City—"

"Sarto je Bru!" burst in Williams amazed, with a Bantu curse. "When did that happen? What has become of our Constitution and Congress and . . . . ."

"I'll go into that some other time," said Hackworth waving a hand. "For the present, just remember that there is a new régime under the Unidum. This ruling body made a national law ten years ago requiring all women to undergo eugenics tests before marriage. If the tests show the woman examined to fall into a certain genetical class, she is then conscripted to become the mate of a scientist, for their children will be born with unusual intelligence — will become scientists themselves!"

● A picture of astonishment and anger grew on the listening man's face. He wanted to shout "inhuman!" but not a word fell from his lips. His tongue loosened suddenly to bring forth a flood of choice Bantu imprecations, causing M'bopo to look at him in surprise.

Hackworth went on like a robot.

"Lila met a certain Terry Spath — a splendid young chemist—a year ago, and they fell in love. Terry came to call often, and in a heart-to-heart talk with Lila, I approved of him and hoped to see them married. They would have been happy, I know."

Hackworth sighed heavily and continued. "Lila took the unavoidable pre-marriage test just a month ago. She wanted to have it over with and marry young Spath and surprise me on my return from this trip to Africa. You can guess the rest, Dan. There are really few women who prove fit and are conscripted. For that reason we never worried much over it. But it had to happen . . . . . oh, God!"

He broke down and buried his head.

Williams sat astounded and horrified; it was inhuman, ghastly. A young girl torn away from her true love and forced into unhappy marriage! It was medieval . . . . cruel . . . . senseless . . . . but wait!

"When must Lila leave home?" Williams asked rapidly.

"She will be gone when we get there," answered Hackworth.

"They won't even let her stay long enough to await your return?" cried Williams incredulously.

"The Unidum is strict . . . . and inexorable."

"Heartless, I'd say!" added Williams. "But is there any way we can get to her before she is out of our reach entirely?"

"Well, yes."

Hackworth pulled out the radiogram from his pocket and glanced at it. "She will be at a down-town air terminal for a half-hour after we arrive at New York. If we hurry after docking— But what's the idea, Dan?" he asked bewildered.

"Just this: If we can catch Lila in time, she will *not* become an unwilling bride!"

Hackworth, extremely surprised, now looked at his cousin with narrowed eyes. Had the long exile from civilization

somehow warped his mind? Did he think some crude method of jungle tactics could save Lila? The man had no realization of existing conditions. He didn't know the Unidum and the new rule. He smiled to himself; his cousin's simplicity was touching. Forty years in the jungles with aborigines!

"Impossible!" Hackworth said the one word with finality.

Dan Williams flushed under his tan. He had a vague understanding of the other's thoughts regarding him. Jungle instinct. It angered him for a moment but saner thought told him he could hardly blame Hackworth under the circumstances.

"Earl," he said firmly, "regardless of what you might consider impossibilities, your daughter's future and happiness are at stake. Are you willing to take a gamble for her sake?"

Hackworth looked at him searchingly. No, far from looking simple and misguided, Williams seemed to radiate a quiet assurance. Could this be the same semi-savage man who ruled a tribe of natives in inner Congo? Could this be the same taciturn jungle chieftain who had but a few days previous been terrified at the thought of leaving Africa? Certainly, a great change had come over Dan Williams. Distraught as he was, and curious to know what the man could mean, Hackworth nodded for him to go on.

"I have in my rawhide bundle," said Williams then, "a vegetable drug — a rather remarkable one. D'Lawoef, the sole survivor of the expedition before ours, had been a physiologist. His purpose in penetrating to that wild region was to procure a fair supply of this drug. During the eight years he lived there before we arrived, he collected quite a supply of the plant which contains the compound in its leaves. He ground it up after drying it into a flake form, always in the hope that some day he would again reach civilization. He didn't. But before he died, he confided in my father and me and turned his supply over to us. In the succeeding years after father had died and I was alone, this supply disappeared, all except one small clay box of it, which I have in my rawhide bundle." He stopped for breath.

● Hackworth waited silently for him to continue, wondering what all this would lead to.

"The alcoholic extraction of this vegetable," went on Williams with a note of tenseness creeping into his voice, "has remarkable properties, according to D'Lawoef—and from what I saw of the man, he was no liar or fool. Injected into the veins, it puts a person into a comatose condition for a long period of time, depending on the dose. The subject suffers no harm provided nourishment is given, like that given patients with sleeping sickness, either sugar in the veins, or simple liquid foods forced to the stomach."

Hackworth, who had listened abstractedly, suddenly saw the significance.

"Then you suggest," he gasped, "that Lila be given the drug and—"

"And her marriage to the scientist forestalled. After that, depending on how events shape themselves, we can plan what to do with that reprieve."

Hackworth had a wild look of hope and joy on his face, but suddenly it vanished to be replaced by despair.

"But the Unidum! . . . . it will be angry. They will send investigators; suspicion will be directed at us—"

"Are you even afraid to take a gamble?" broke in Williams suddenly scornful. "This Unidum—you talk as if it were a king and you its abject slave! In my time, forty years ago, people were not so meek and cringing to government, especially when it did a wrong thing. And this eugenics business is certainly a wrong thing—or at least tyrannically applied."

Williams went on, seeing a spark of hurt pride in his cousin's face from the mention of "king" and "slave."

"Well, Earl, shall we plan on using the drug, or shall we forget about it and let Lila be married off with a broken heart?"

"No, no! It's worth the chance!" cried Hackworth, springing to his feet.

"But yet," he said weakly, sinking to the

chair again, "the drug itself might be dangerous to use. What assurance have we, beyond D'Lawoef's word, that it is not harmful? It might poison Lila, cripple her, derange her mind!"

Williams leaped to his feet and paced the room, cording his muscles in exasperation. For himself he was willing to trust D'Lawoef's word, having known the man. But Hackworth would naturally be doubtful and apprehensive about letting his daughter be drugged by a substance unknown and untried.

Suddenly Williams whirled, his face alight.

"I have it! Young Terry is a chemist, isn't he? We'll put the whole matter before him, let him test the drug if he can in some way, and make the final decision. After all, he is more vitally concerned than either you or I in the outcome. Love and knowledge both will guide him."

"Good!" cried Hackworth, his face lighting up again with hope. "If Terry approves of the drug, I can have no further objections."

With a great load off his mind, Hackworth began again to undress.

"Wait," said Williams before he had his shoes off. "Can we get a message to Terry? Time is precious; there will be little enough of it after we dock. We must have him prepared for this."

Hackworth looked dubious for a moment.

"Foreign radiograms, like one from this ship to New York, are carefully looked over by Unidum officials. I'm afraid if we made any mention of our plan, or even mentioned Lila's name, suspicions might start immediate investigation. They would hold the radiogram and then apprehend us on the dock and demand explanations. It wouldn't be safe, Dan. However, we *could* send him a message merely asking him to meet us at the dock. That will get us in touch with him so much the quicker."

"Exactly," agreed Williams. "Get that message through."

Hackworth went forward in the hyp-marine and left the message in the radio room after extracting a promise that it be sent without delay, for which he paid a handsome fee. On his return, they went to bed by mutual consent, completely fagged by not only the jungle hardships but also the enervating excitement of their plans and discussions.

Some hours before the hyp-marine was due at the New York docks, they found themselves considerably refreshed and wide-awake. Williams wearied of looking out the window at endless vistas of ocean and, hard though it was to keep up conversation with the ever-present engine drone, asked Hackworth to explain more fully the mysterious Unidum.

"A great war broke out in Europe in 1936," began the latter, "when all the world was in a slough of stagnation from the Depression. It was called the All-Nations War, and was a series of cataclysmic battles that quickly involved every country in greater or lesser degree. It was the World War over again, but ten times more hideous. Two years later all governments were tottering; Europe was a shambles and a titanic revolution broke out in what had been the United States. Hostilities finally ceased for pure lack of armament, and civilization found itself horribly shattered.

"To me personally, a young and lucky petty officer, it was like a fearsome nightmare. It was simply ..... hideous!

"Then came the rise of the Unidum. A large group of scientists and men of philosophy, having foreseen the result and banded together in preparation, pushed over the staggering governments, set up its own, and brought reason out of chaos. The Unidum officially came into being in 1943, the central government of all Europe and North America. The rest of the world was left to itself. Asia promptly formed a federation of states under a central ruling power. Africa and South America, under the ex-officio guidance of the Unidum, also formed unit federations. That marked the end of the old-time nationalism.

"The Unidum Capitol is in New York City, the spot from which the collective

destiny of a half-billion souls is guided."

Williams whistled in amazement.

"How is it possible to hold under one rule so many different peoples, each with a different language, many hereditary enemies?"

Hackworth smiled.

"Because, Dan, the Unidum was composed of intellectual giants whose methods were exceedingly clever and enlightened. Several things were immediately undertaken with admirable efficiency. The overloaded populations of Europe were transferred to North America; the English language became standard in all Unitaria, which is the name for our country; and work was divided wisely and with justice.

"And so, Dan," summarized Hackworth, drawing a long breath, "1973 is vastly different from 1933 politically. It was strange to see how suddenly a feeling of cooperation sprang up all over Unitaria when one language became standard and when every group of people realized it had the same privileges and rights that any other group had. Dan, it fostered brotherhood! Really, it was simple — there in Europe were a few dozen tiny states, each speaking a different language and each jealous of the other. And yet, all were white people, most of Aryan stock and speaking Aryan root languages. It was only the traditions of centuries that had kept antagonism alive. Once the Unidum stepped in and painted out boundaries and made them responsible to Unitaria as a whole, those old prejudices evaporated like morning dew in the sun."

Dan had listened, almost incredulous.

"It all sounds nice enough, Earl; I can hardly credit that the Unidum, after doing all that admirable work, should have made a law like the one that affects Lila."

Hackworth leaned forward and lowered his voice.

"I've only painted the bright side of it," he said. "Naturally, this is no millennium or Utopia. There are still miscarriages of government and justice. The scientists, who now have a finger in government, are a bit emotionless and stony-hearted in their zeal for a better world. The Eugenics Law is an example of that."

They gave up the conversation then, for it strained their throats to talk against the drone of the engines. Williams mused to himself, finding it strange to think that his return to civilization after forty years had precipitated him immediately against law and order—at least one phase of it.

CHAPTER III

The Drug

● The steady drone of the engines above changed its pitch, and Williams looked out to see a strange new world. The Statue of Liberty was still there but the New York sky-line had become weird and incredibly changed. Not only had the buildings sprouted upward amazingly since 1933, but they had grown together with spider-like spans and vines. It was feverishly unreal. New York might have looked like that through a cheap mirror with fine cracks all over its surface, distorted and impossible. And what were those bees and flies swarming around? . . . .

Williams started at a sharp nudge in his ribs.

"Come out of it, man!" Hackworth was saying.

Before they stepped to the dock depot, M'bopo was given two suitcases and instructed to follow closely. Under his arm, Williams clutched his rawhide bundle tightly. The customs and passports inspection were rapid and efficient in comparison to the same processes in former days. Almost as soon as they stepped into the anteroom, they were released.

"You being a white man," explained Hackworth, "you are a bona fide citizen of Unitaria the moment you step on land. They will check your passport, and M'bopo's, at some future time."

While Williams stared with interest at the colorful crowds passing them, Hackworth led the way to the depot. A tall young man immediately strode up.

"Terry, my boy!" cried Hackworth, almost hugging him. "How are you?"

"Fine. But you—Africa hasn't treated you so well; you are thinner!"

"There are other things," muttered Hackworth half to himself. Then he presented Williams and explained M'bopo.

Terry Spath was a tall, well-knit youth of twenty-four, with a splendid muscular development from constant gym-work. He had calm grey eyes that seemed to hide lurking fires. The determined line of his mouth and chin bespoke a sturdy will. Chemical stains were on his hands. He had an air of unstudied nonchalance at all times except when excited. Facially he could only be called ruggedly handsome.

The greetings had been semi-jovial, but almost immediately Hackworth looked grave again. Terry touched his arm.

"You still have time to . . . . to see Lila, if we all hurry."

"We *must* see her, must *stop* her," returned Hackworth.

Terry opened his eyes wide and looked from one to the other.

"But the summons! She received them a week ago. If we stop her, the Unidum guards will come after her!"

"We're wasting time," said Williams fiercely. "Let's go after Lila and explain things later. What's the quickest way of reaching her?"

"Electro-car to an air terminal—"

"All right," said Williams firmly. "You and I, Earl, will go there. You, Terry, and my servant must go to your laboratory." He pulled from his pocket a crude clay box whose cover had been sealed with latex rubber. "Make any tests you can of the alcoholic extraction of the vegetable fiber within this box. *Everything depends on that!*"

Williams whirled on M'bopo, flung a rapid flood of dialect at him, and nodded to Hackworth for them to go. Hackworth had taken the opportunity, while his cousin talked to M'bopo, to offer a hurried but more complete explanation to Terry of the intended use of the drug.

"Bring her back, then," cried Terry, his face lighting. The lurking fires in his eyes flashed to sudden life. There was a man with spirit, reflected Williams. They separated, the two older men, Hackworth in the lead, taking an escalator upward to the electro-car station.

To Williams it was all confusion and madness, this New York of 1973, strange, unreal . . . . incredible. Bright clothes, great crowds, many voices, droning loudspeakers; yet how subdued was the city noise! The old crashes and bangs and shrill whistles were gone. And where was traffic? He could see none of the ground there . . . . *Sarto!* . . . . t h a t wasn't the ground! They were on a sort of aerial highway. The escalator took them upward and upward till Williams was nervous. Those bees and flies—were aircraft! This must be the center of the universe to judge by its activity!

Hackworth was pointing to an open door. They were on a long, wide enclosed platform. Williams could see neither ground nor sky nor ocean. There were voices babbling inside, calm and soft; and there were comfortable seats. They sat down. Williams started as two semi-flexible bands seemed to jump out of nowhere and enfold his thighs and lower chest. Hackworth sat beside him, worried and preoccupied.

A low whine sobbed through the air. A slight jerk. A feeling of pressure. Past the windows a blur of striated metal swept. They were moving, and fast. At times brief glimpses came to Williams from the window of bottomless chasms and leaning heights. Gentle curves pressed him to one side of the seat. Several times the vehicle stopped. People getting off and on.

Later there was a swift stop, a complete swing, and then more motion that must be blinding speed, thought Williams. *Je Bru il Bra!* Forty years of Africa had certainly not prepared him for this. Would he ever be able to feel at ease in this supercivilization?

Suddenly he saw Hackworth on his feet and started to jump up, only to find the thigh and chest bands holding him back. Hackworth bent down and pressed on the elbow rest with his hand. The stiff bands

swung back flat to the seat. They stepped out on a platform, again enclosed like an island in space. Escalators—down, down to a wide level space that seemed to be the flat roof of a building.

"The air terminal," informed Hackworth, motioning forward.

There were yawning apertures with lighted depths at one side of the level space, which was a landing field. As they traversed a pedestrian walk bounded by latticework rails, a humming monster fell from the sky not a hundred yards away —a sudden roar of propellers, then silence. People stepped out calm and indifferent, laughing.

Hackworth pointed to a huge clock hanging on a wall.

"We've got five minutes to find Lila!"

He led the way to an elevator that took them below to the loading depot for passengers. A hurried series of questions to a man in a booth labeled "Information," and Hackworth half ran across the huge chamber toward the numbered air-liner berths. Past three they went and then entered the next in which people were milling, some entering the giant flying wing with four engines.

Hackworth frantically searched about in the crowd. His lips were unconsciously saying "Lila! Lila!" softly. Then he ran forward, almost rude to others in his haste.

"Lila!"

A young woman with magnificent auburn hair turned, startled in the process of walking toward the cabin of the ship. Her eyes caught theirs and she stood stock-still. Hackworth ran to her eagerly and embraced her.

After a few smothered endearments, Williams heard Lila say: "I'm so glad you were able to get here in time to see me before—"

"Not just to see you," said Hackworth. He looked around nervously before continuing. "But to take you back home!"

"Why . . . . why . . . . oh, no! The summons! I must hurry—the ship leaves in a few minutes."

Hackworth grasped her arm and gently pulled her away from the cabin and to the wall where the crowd was thin.

"Lila, dear girl! You're coming with us. Mr. Williams here—"

Lila noticed him for the first time. In great surprise she extended her hand and then flashed him a smile.

"Mr. Williams here," went on Hackworth rapidly and in a whisper, "wants you to let him help us all . . . . we've met Terry already . . . . he's waiting."

The girl's face reflected great astonishment and indecision.

"But, father, I must go with this ship! Don't you understand that I've had three summons already? They threatened to send guards if I still failed to arrive. That would be a terrible disgrace."

"Lila," spoke Williams for the first time, "will you trust me that I can help you and Terry in this matter?"

Their eyes met, sturdy blue and limpid brown. Something seemed to emanate from the blue, something to be trusted. Womanly intuition caught the suggestion.

"Yes, Mr. Williams."

"Good. Lead the way," said Williams quickly to Hackworth. "Terry's laboratory."

A long electro-car ride with one transfer took them to the suburban plant of the food products Branch E, in which Terry worked as a chemist. Williams was surprised to notice that suburban New York had hardly changed at all in comparison to the down-town business section. It looked here more like 1933.

They descended from the electro-car station to the street level. There were sidewalks and pavements and quiet residences, and for a moment Williams thought he was a young boy of eighteen again, roaming the streets. But he merely had to look up at the electro-car gathering tremendous speed, looking like a long silver needle in the distance, to realize that it was 1973.

Hackworth, who had visited Terry's laboratory several times before, led the way to a side entrance in the long, low plant and opened the door. They passed down a long hallway whose various doors

were numbered and from behind which came strong chemical odors. Finally they stopped before a closed door and Hackworth knocked.

After asking who it was, Terry's voice came to them. "Come in."

He was standing before a chemical bench covered with glassware and bottled materials. In his rubber-gloved hand he held a test-tube half filled with a delicate green solution, at which he peered intently. It suddenly frothed and spilled over his hand.

Terry turned with a puzzled expression that immediately became a look of tenderness as he stepped toward Lila with outstretched arms. While they clung to each other mutely, Williams quietly closed the door and turned a key in the lock. He had already seen that Terry had been the only one in the room. Secrecy would be vital in everything they did from now on.

"Terry," said Lila, finally extricating herself gently from his embrace, "what is this all about? Why are we all here in your laboratory?"

"I hardly know myself, Mr. Williams—"

Hackworth interrupted. "I'll explain. Dan conceived a plan for keeping Lila from being married to a Unidum scientist and convinced me that it was worth a trial. But I won't give the final decision. That rests between you, Terry, and Lila. Dan, you tell about the drug."

Williams pointed to the opened clay box lying on the bench, half-filled with a dry, flaky material like rough-cut tobacco.

"What did you find out about it?" he asked Terry.

"Well, the time has been short and the tests simple, but it is related to the narcotics like opium and morphine. It should have a similar effect on the human body, producing a sleepy state. But it has a reaction that puzzles me exceedingly. Is it widely distributed in Africa, Mr. Williams?"

"No. The man who collected that vegetable flake told me that it is a rare plant, apparently existing only in central Congo. He planned on carrying a lot of it back to civilization and testing its narcotic principle. His name was D'Lawoef—"

"D'Lawoef!" echoed Terry excitedly. "Well-known physiologist of two generations ago! Did he tell you anything more about this substance?"

"He told me this," replied Williams, "that it would produce a comatose state in any living being for periods of time depending on the dose. It is not a dream state or semi-consciousness like opium—it is actual, complete repose. According to D'Lawoef, there is no common antidote. He knew that because he tried it on a native and failed to rouse him with any of the simple compounds in his portable chemical kit. He believed, too, that probably there was no antidote at all, for it is a remarkable substance, he said."

Terry nodded. Then he held up a small flask with a colorless liquid.

"Here it is in a ten-to-one alcohol and water solution . . . . *ready for injections!*"

Williams started. Then Terry would not hesitate for a moment to take the gamble. He had thereby given his consent. But Lila?

Williams turned resolutely to the girl whose eyes showed bewilderment.

"Lila, an injection of that liquid Terry showed us will put you into a coma or induced sleep. Then we will inform the Unidum that you are strangely unconscious and cannot therefore be married. What they will do then we can't say, but it will prevent what none of us here want to happen—your forced marriage to a scientist. After that, we will see if that fate can be turned aside altogether."

"Oh, I . . . . I don't dare," said the girl. She saw the immediate look of veiled scorn in Williams' eyes, showing that he thought her spiritless, and continued: "Not because I'm afraid for myself with that drug, but because the Unidum will probably investigate and make things miserable for you three men."

Williams' look of admiration was sufficient apology for his previous glance of scorn. The three men looked at one another.

Terry was the first to speak. "For our love's sake, take it, Lila. If the Unidum *does* find out, I'll take all the blame and your father and Mr. Williams will be safe."

Both the older men began to remonstrate, but Terry went on firmly. "This is all a big gamble which concerns primarily Lila and myself and . . . . our happiness in the future. I am already indebted to both of you for your part in this. The rest must be *my* responsibility. Lila, darling"—he turned to her—"you will take the drug in the hope that it will bring us together in the future? Perhaps we can flee the Unidum . . . ."

Lila gave her consent by throwing herself into his arms.

"When will the Unidum begin finding out that Lila has disobeyed the summons?" asked Williams of Hackworth.

"Possibly tonight. The summons demanded Lila's appearance at the Unidum Subheadquarters in Philadelphia before 8 p.m. By nine or ten, they will begin to lose patience."

"It is now about six o'clock," mused Williams. He thought a moment while the others waited respectfully. They had unconsciously accepted him as the leader. A subtle dominance in his character was already making itself felt— the same quality in his character that had made him the chieftain and sole ruler of a thousand natives in Africa for years on end.

Finally he spoke, his words terse and to the point. "We will all go to your home now, Earl. We will give Lila the drug at eight o'clock, since it is unlikely that the Unidum will make any efforts before that. Then we will simply wait for the authorities to make the next move."

"I have my car outside," said Terry. "It'll take longer than electro-car service, but will be more convenient."

Williams nodded and they left the laboratory after Terry had carefully made a package of the solution and a hypodermic needle. The rest of the vegetable fiber he locked in a cabinet. M'bopo, who had been standing like a robot in a corner of the laboratory, followed them silently.

Terry opened the door of a sleek, satin-finished automobile whose long body seemed to flow in ripples from a blunt rear apex. To Williams it looked like the futuristic advertisements of 1933 come true. The smooth purr of a powerful motor was uninterrupted by shifting gears as the vehicle glided forward with magical ease.

● During the half-hour drive from the laboratory to the Hackworth home, little was said. Their nerves were all tense, their throats dry and strained. Williams took in the passing scenery with an eager eye. Change . . . . change . . . . forty years of it . . . . a lifetime of it. Yet here and there he caught brief glimpses of sections startlingly familiar that seemed to have changed hardly at all. The car glided swiftly along in light traffic, seldom stopping. Williams noticed that people walked leisurely and sometimes indolently—the tempo of city life had apparently gone down since 1933. Even the cars, except their's, merely crawled along as though the drivers had all the time in the world.

"Don't you recognize the place?" asked Hackworth when they had entered a section of tree-shaded avenues lined with bungalows and small mansions.

"Morningside!" gasped Williams suddenly, seeing several houses that had existed even in 1933. In general the later dwellings were spaced widely and exhibited individual styles. At least 1973 had brought something new and invigorating in residential architecture, reflected Williams. The stereotyped standards of an earlier era had been abolished.

Terry halted the car before a small, neat bungalow surrounded by hedges, flower patches, and wide lawns. The inside was luxurious, almost lavish, but at the same time home-like in arrangement. The furniture was a blend of elegance and comfort. A manservant picked up the suitcases and took them upstairs.

Ordinarily a jovial host, Hackworth was too nervous and apprehensive that evening to show his cousin around the house. Din-

ner was immediately served, presided over by a maidservant. Lila displayed her sparkling spirit during the meal, despite the chill thought of what would transpire later in the evening. But it would have been far gloomier if M'bopo had not entertained them with his awkward, yet proud, use of tableware. At times when the implements clashed in his undecided hands, he would gaze around with a broad grin, as though sensing that the others were amused.

Williams ate mechanically, deep in thought. At the end of the meal, he suddenly looked up and said: "There's something more about the drug I haven't mentioned."

"In that case," put in Hackworth, "let's all go into the parlor and sit down in comfort."

This done, Williams continued. "D'Lawoef mentioned that during his eight-year stay with the natives, he found them using the drug. The medicine men use it to induce restful sleep in fevers and painful sick beds. Now the Frenchman also claimed that the person under the influence of the drug could be made to respond to impressions given just before the coma overtook him . . . . something like hypnotism, I suppose. If we could be sure of that . . . . we could impress on Lila's brain the suggestion not to awaken until somebody's voice, Terry's preferably, commanded her to!"

"But what would be the purpose of that?" queried Terry.

"In case the Unidum sends doctors to revive her—who might succeed. But the hypnosis ought to last longer than the drug, according to D'Lawoef, who naturally tried it out."

"It would be a good thing to know," agreed Hackworth, "but how test that here and now? And time is getting short—quarter to eight!"

Williams shifted his eyes to M'bopo who sat cross-legged on the rug, and began to speak softly in Bantu dialect. The expression on the black man's face became frightened once. Further sharp words from his master changed it to resignation. M'bopo muttered a few words with a bow of his head.

"M'bopo is my voluntary slave," Williams informed them. "I saved his life once. Get the hypodermic, Terry. Give him the smallest dose conceivable, a tiny drop."

Terry opened his package which had a sterilizing solution as well as the drug and hypodermic. He dipped the needle, wiped it with cotton, and drew in a drop. M'bopo, erect on his feet, bared his arm. Terry plunged the needle in and pushed the plunger.

Williams immediately waved him back and began to speak slowly and emphatically in dialect, gazing all the while into the black man's eyes. The others watched intently.

A film came over M'bopo's eyes and they drooped shut after a half-minute. Williams caught his tumbling body and set it in a chair.

"That small dose ought to be ineffective in fifteen minutes," he said, turning to the others. "Then we'll see."

When the clock struck eight, Williams asked Hackworth to shake M'bopo and command him in dialect to awake. But no amount of shaking or talking brought any change to the senseless African. Then Williams motioned his cousin away and stood before his slave.

"*Umo gaak,* M'bopo!"

For a moment, it seemed the words had no effect. Then the eyelids fluttered and suddenly flicked open. M'bopo looked up at his master with a sigh of relief, as though he had expected never again to see him in the flesh.

"Good Lord!" gasped Terry. "Then it works!"

"Not conclusively," amended Williams. "The dose might have been just enough to keep him asleep till after Hackworth tried to awaken him. But it gives us a reasonable hope that Lila can be put into a coma from which only one person can awaken her, which will be Terry. So with—"

A clicking sound echoed through the room, causing Williams to stop.

"The Unidum radio signal!" cried Hackworth turning pale. "I must answer. It is more than likely . . . . about Lila!"

"Then listen," Williams said rapidly, "Lila is strangely sick, in a coma, for the past few hours. You are perplexed and are about to call a doctor and see what it is."

Hackworth nodded and placed himself before a projecting mouthpiece in the wall, surrounded by a carved frame of gilt metal. He tripped one of two levers beside it, which would throw the incoming voice through the room; the other lever would have brought the voice through a receiver hanging on a hook just below the mouthpiece—for private conversations.

"Hackworth speaking."

"Unidum calling; Eugenics Bureau. Your daughter Lila has failed to appear at the subheadquarters in Philadelphia, as specified in the third and final summons of September 10th, three days ago. What have you to say?"

The voice was peremptory and commanding.

"I am most sorry . . . . I—I . . . ."

Williams gripped his cousin's hand tightly. Hackworth drew a breath and began more firmly. "My daughter Lila has inexplicably . . . . er . . . . fallen sick just this afternoon. She is in a coma and nothing seems to awaken her."

"What?" came from the diaphragm on the wall. "In a coma?" The voice became stern. "Is this some trick?"

"No," returned Hackworth now playing his part with assurance, "it is the honest truth. My daughter has not been feeling well for many days. A few hours ago she simply collapsed and has failed so far to awaken."

"Have you a doctor there?"

"No, but I was just going to—"

"Never-mind," interrupted the voice. A new note crept into his tone. "We will send *our* choice of doctors, since your daughter is legally under the care and authority of the Unidum's Bureau of Eugenics." A click and it was gone.

Hackworth wiped a perspiring brow.

"You see, Williams, what the Unidum is like? There'll be a doctor from them here inside of an hour. He will be suspicious. He will—"

"We must hurry," interrupted Williams.

He turned to the girl and looked into her eyes as he said: "Lila, are you ready?"

Without a word, the girl embraced Terry and kissed him, then bared her arm. Williams gave a few last-minute warnings. Then Terry filled the hypodermic needle, licked dry lips, and slowly brought it closer to the girl's arm. Without flinching, Lila waited for the needle. Terry hesitated, trembling in every limb for a moment. Lila caught his eye and silently commanded him to do it.

A second's work and it was over. Then Terry looked into her eyes, with his arms supporting her body, and repeated over and over: "Awaken only when my voice commands . . . ."

CHAPTER IV

The Unidum

● Dan Williams sat before a two-foot oval screen in the lounge of Hackworth's home with the shades down and the doors closed so that the television images would be clear in the dark. M'bopo sat at his side, the whites of his large eyes gleaming eerily in the ghost-light of faintly illuminated dial controls. Talking and singing figures became involved in a stirring intrigue of the year 1945 when the rising Unidum régime had startled a whole world. The sound effect which seemed to come from every corner of the room was absolute perfection without the slightest tell-tale hum of radio apparatus, but the visual interpretation flickered and fluctuated somewhat. Television had gone into the home before 1973, but in an undeveloped state. When the drama ended, Williams played with the phosphorescent dials and brought to the screen a still worse scenic effect showing a race between a rocket auto and rocket train on tracks. But indistinct though it was, Williams

was awed when the announcer revealed that the event was taking place at that identical moment thousands of miles away near Berlin in Europe.

Hearing the front door slam, Williams sprang to his feet and went to the parlor. Hackworth, who had come in, immediately began speaking.

"That drug is all you said it was, Dan. Lila is sleeping as sweetly as a child. The doctors are stumped and told me as much. They asked me a hundred questions and I kept wringing my hands and looking heart-broken . . . . oh, that was great!"

He seemed in great humor over it. It was three days after the evening in which his daughter had been given the mysterious narcotic.

"Did they seem suspicious?" asked Williams.

"In a way. When I mentioned having returned from Africa, the doctors—there were three of them—looked significantly at each other. I know what they figured then — *sleeping sickness!* — transmitted from me as a passive carrier to my daughter Lila. Now for the next week they'll work at that angle, and of course they'll simply get more puzzled. This is working out great, Dan. My heart sank the other night when the Unidum doctor, after his short examination, ordered Lila removed to the Eugenics Bureau's own hospital. I thought sure they would awaken her somehow—"

"No, Earl. D'Lawoef was right after all. I think we can rest assured now that Lila will *not awaken till Terry and Terry alone commands her to!*"

"And that means—"

"And that means we've got plenty of time to plan something. By the way, is she in good hands—that is, is she being fed properly, etc.?"

"No worry about that, Dan. The Unidum doctors and hospitals are the pride of medical science. As long as she is in their hands, they will take perfect care of her."

"The next move," said Williams half to himself, "will be ours. Terry will be here tonight. We'll talk it over then. Right now, Earl, suppose you tell me a few things I want to know but never had a chance to find out so far. Up till now its been hustle and bustle and rush and run. Honestly, I have only the vaguest idea of what sort of world I'm living in."

"Come on, then," said Hackworth. They went to the drawing room where Hackworth kept cigars and tobacco. In passing through the lounge, they found M'bopo twisting the radio dials with reverent hands and staring at the screen in fascination. Williams spoke to him when he started up and told him to stay there and play the set all he wanted to.

"First of all," said Williams when they had seated themselves in comfortable chairs and lighted cigars, "tell me about yourself, Earl. Here we've been together for days and I still don't know what your life has been in the past forty years or how you came to find me in the heart of Africa."

"Exploration has occupied my life," began Hackworth, "just as it has the lives of many of our common ancestors. When the All-Nations War broke out—that frightful cosmic struggle of 1936-38—I became an officer in the United States air force and, God help me, I was there at the shelling of Tokyo. Two million people—try to imagine it, Dan—exterminated like rats in ten hours!

"Enough said about the war; I'll skip past it. When the Unidum took over control in 1943, I was commissioned as surveyor for new sites for cities built here in America. A hundred million people were shipped over from suffering, starving, exhausted Europe and put to work in the new cities. That was the beginning of reconstruction—post-war rejuvenation. But I did not stay at that. In 1948 my requests were finally granted and I was commissioned as an explorer. Since that time I've been in a dozen out-of-the-way corners of the world. I married four years later. My wife, Heaven bless her, died in childbirth, bearing Lila.

"You will understand, Dan, that I had never forgotten you and your father. But

knowing Africa and especially the Congo —and *not* knowing the ways of the Unidum Exploration Bureau—you will readily comprehend that I tried to reach you only twice—and twice failed. Three years ago I was fortunate in discovering a rich deposit of platinum ores in Siberia. My rewards for that were sufficient to make me independent. Then, with my new wealth, I made an intensive study of the matter, uncovered the north route, and finally penetrated to you. It took me months actually to find you and I had little hope of seeing any of your father's expedition alive, as the Zulu activities were rumored all over the coast. You will have to imagine my great joy when I saw a white man and knew it to be you.

"That, in brief, has been my life, Dan. With the pension from the platinum find, I am very comfortably situated and could sit the rest of my life away in an armchair if I wanted. But I plan on trying the Amazon again before I quit the game."

Williams smiled in understanding.

"I understand, Earl. You've got that fire in your blood that has been in the Williams line since the discovery of America. It's the same urge that sent my father and myself into the Congo forty years ago. But the results of that were strange indeed. . . .

"Speaking of worldly wealth," went on Williams, shifting his line of thought, "is there much unrest between labor and the capitalists today as there was in 1933?"

"Dan, you'll be surprised to hear this," answered Hackworth. "There is no such thing as 'capitalism'—in the 1933 sense —existing today! The Unidum controls transportation, communication, and food. All other industries are under Unidum sponsorship, too, but in a lesser degree. The average standard of living has become high in Unitaria. What you would call our 'rich' today would have been considered paupers to the money barons of 1933, but at the same time our 'poor' today never face want nor suffering nor privation. From the highest to the lowest in Unitaria is not a great step—from the money point of view."

Williams was surprised at these revelations.

"Then the Unidum has done good work."

"Yes, Dan, it has done more good than evil. As I told you during the hyp-marine trip, there are still sad mistakes made, like the Eugenics Law. But, speaking impersonally, there are a dozen things the Unidum has done that are as beneficial as the Eugenics Law is detrimental. And the basic idea of that law—to produce great minds—is worthy in itself."

"But the method, forcing women into loveless marriages, is . . . . is inhuman!" added Williams quickly. "Sacrifice of personal happiness for future benefit to the state is . . . . is . . . . ah! It is the very thing an emotionless scientist would think of! Those 'scientists' you speak of, Earl; just how do they figure in the Unidum?"

"Well, the term 'scientist' today is applied only to a man of knowledge who has proven himself a worthy savant. Usually he must perform some brilliant intellectual work, for which he receives a diploma and the special privileges accorded men of science. The Unidum is composed of two equal-powered executives, two lawmaking bodies, two judicial systems, and a long line of bureaus. Now exactly one-half of the total government is in the hands of diplomaed scientists. One of the executives is a scientist; one of the legislative bodies is the House of Scientists; one of the judicial systems is the Science Court; and many of the Bureaus are purely scientific in nature—as the Eugenics Bureau."

"And the resulting government?" asked Williams.

"And the resulting government has made Unitaria a supercivilization, way past the rest of the world. For the first time in history, the intellectual forces of mankind have become the governing power. In the past, it has always been the ruthless, hereditary (and therefore degenerate), and selfish forces. The Unidum is the first experiment in a rule of *reason* as opposed to a rule of *might and main.* It is a milestone of advancement."

"But the Eugenics Law," commented Williams, somewhat disconcerted in finding his cousin praising the Unidum so highly, "there is no excuse for that."

Hackworth waved a noncommittal hand.

"Enough about those things for a while," he said, changing tone. "I see a raw hunger staring out of your face. It's dinner time."

"*Umo g'rak paas,*" said Hackworth in bad dialect to M'bopo as they passed him on the way to the dining room. The black man sprang up with an alacrity that made them laugh.

Terry arrived soon after the meal. Hackworth repeated to him what had occurred at the hospital.

"By the way," he added, "I also met the scientist that Lila . . . . er . . . . was to have married. He dropped in just before I left. Professor Jorgen is his name, and he is a biologist. He was a nice enough fellow except that he had an overbearing air of self-importance—something Lila could never have been happy enduring. He assured me he would do all in his power to see that Lila was cured of her 'ailment.' He was all confidence."

Terry had listened with clenched fists; his lips had tightened grimly.

"I'd like to face him man to man," he growled angrily. "The very thought of any other man touching her while she lies helpless—"

"Now, now; calm yourself," interrupted Hackworth, but there was sympathy in his tone. "I know how you feel, Terry. I'm glad, though, that I *didn't* take you along, as you so much wanted, because I'm sure you would have lost your temper and got yourself into trouble."

"If I ever meet Professor Jorgen," said Terry more quietly, but still frowning darkly, "I will make him wish he'd never heard of Lila Hackworth."

"I'm sure you would," agreed Hackworth drily, "but the Unidum would afterwards make you wish you'd never met Jorgen."

"If I thought it would do any good," continued Terry, "I'd kill the man!"

Hackworth snorted.

"Terry, how silly to even think of that. You know perfectly well that if Jorgen were to vanish, Lila would be given to another scientist."

"Just a minute," Williams said firmly as Terry seemed about to continue the subject; "we're together tonight for the purpose of planning the future, not to think up violent impossibilities. Now, in brief, the matter is this: Lila is forfeit to Terry under the Eugenics Law; but at the same time she is in such a state that the Unidum cannot accomplish her marriage to a scientist. We are reasonably sure that she will not awaken till Terry himself commands her to, and at the same time we know that she will be well taken care of. That gives us time enough to plan our next step.

"There are only two possibilities as I see it: either strings must be pulled to release Lila from the Eugenics Law, or she must be spirited away to a foreign land safe from the reach of the Unidum."

"The first is practically impossible," said Hackworth.

"Why?" countered Williams. "You've got money, haven't you? You can bribe officials and buy out opposition. In 1933—"

"Yes, in 1933," Hackworth took up the words, "bribery and graft were a flourishing trade. *But this is* 1973! The Unidum, in keeping with its ideals, is adamant to corruption of that sort."

"Do you mean to say," hissed Williams with incredulity in his voice, "that money could not cause a little change in records, releasing Lila from—"

"Very unlikely," said Hackworth, and Terry nodded. "Dan, you don't know the Unidum and its hard-and-fast system. Money would not take the dot off an *i* in any Unidum records!"

"Can anything be done through friendship? Are there any influential men who would help you for the sake of friendship?"

"That too is doubtful," muttered Hackworth.

"Would it do any good to appeal the case to a court?"

Hackworth and Terry exchanged wan smiles.

"That would be like taking meat from a hungry lion and offering it dried biscuits," said Hackworth. "You see, Dan, many of the women—probably most—confiscated by the Eugenics Law, take their fate philosophically and soon come to forget their first bitterness. They are treated well; their husbands are influential and respected; their life is easy—the court would laugh at the petition to grant one girl a release because she loves another man."

"Yet you, Earl, and Terry, *you* would not laugh."

"I should say not," agreed Terry vehemently. "Even outside of the fact that I am the victim of the Eugenics Law's injustice, I never felt in my heart that it was right. The women concerned should have a free choice."

"I agree heartily," said Hackworth.

"And I at first glance considered it inhuman," finished Williams. "Since it seems that neither bribery nor friendship will release Lila, the only possibility left is—"

"Wait!" cried Hackworth suddenly. "I have a close friend in Long Island City—in fact a remote relative—who might .... at least I can talk to him about it. He is secretary to Executive Ashley."

"Who is that?"

"One of the two executives of the Unidum, corresponding to the president of a democracy. The scientist executive is Professor Molier. Ashley is the other and is not a scientist."

"Good," said Williams. "That's worth a trial, as much as the drug was."

"I'll see him tomorrow," said Hackworth. "But we can't bank on it too much," he added gloomily. "I'm telling you, Dan, you have no idea of the efficiency and .... and .... and impregnability of the Unidum."

"You've said that before," countered Williams. "But I for one will battle the whole iron system for Lila's sake. So far we've succeeded in halting the Unidum decree for a space of some time. Why lose heart? Not till we've come against a stone wall should we give in."

"I'm with you there," cried Terry. Williams flashed him a look of approval.

"And so am I," said Hackworth.

"Agreed," said Williams. "So it's a matter of scouting at present. In Africa, when surrounded by Zulus, I hunted here and there during siege till I found a weak point. Then I sent through a body of my best Bantu warriors to fall upon their backs. In that way I more than once beat off an enemy force five times our strength. Analogously, we must first find the Unidum's weak point, if any. If not, we must resort to flight. You, Terry, just go about your work till you get a call from us."

● A mile from the Hackworth home was the airport at which was kept their private Sansrun airplane. It was a warm and pleasant September day as Hackworth and Williams walked toward it, with M'bopo behind them like a faithful shadow. He had pleaded to go along with his master.

It was very quiet and the passing strangers sauntered leisurely. Now and then an automobile purred smoothly by, shining in the bright sun. Overhead an occasional airplane droned along, some large with multiple engines. Far to the left an electro-car sped on its rails like an enlarged needle.

"Somehow," said Williams, "this just seems like 1933 caricatured by a clever artist." He waved an arm to include everything. "I can still see the old Morningside behind all this. Maybe I merely dreamt when I stepped from the hyp-marine and thought I saw down town and Manhattan Island overgrown with a strange architecture."

"No," smiled Hackworth. "Down town *has* been almost completely rebuilt since 1933, whereas all else of New York stayed pretty much the same. The same has happened in all big cities of Unitaria. Similarly, complete though the change has

(Continued on page 237)

(Illustration by Winter)

Once we passed twenty black slaves dragging a block of stone through the street on a wooden sled.

VOICE OF ATLANTIS

By LAURENCE MANNING

● You will be pleased to read this third tale told in the lounge of the Stranger Club. This series is fast becoming as popular as the author's famous "Man Who Awoke" stories.

It is admitted that time-travel is one of the most fantastic themes in science-fiction. Fans have become tired of the old hackneyed story in which the hero hops into his time-machine and finds himself in the past or future.

But in this story, Mr. Manning propounds a *conceivable* means of accomplishing this feat, with a logical, convincing explanation that gives the tale a thrilling atmosphere of living actuality. There is a bit of satire in the story, also, which brings out the weaknesses of the human race—it will amuse you. We guarantee that you will thoroughly enjoy this tale, as you have enjoyed Mr. Manning's previous contributions.

● I heard this story last winter, but have just now got around to writing it out. There were half a dozen of us sitting around the great fireplace up at the Stranger Club on West 53d Street. Colonel Marsh was there, for one, and Jean LaBert had been telling us tales of the country just southwest of the Atlas range in Africa. We all grouped our chairs close together and I remember the circle of intent faces with the light flickering upon them. Above, on the walls, the Club's collection of animal heads, their glassy eyes glittering in half-light, seemed to be intent, too, upon the story.

His name was Bernard Volking. I had not met him before—a quiet mountain of a man with a smooth uninterested-looking face. In utter frankness, I should explain that drinks were served. Volking had sipped three or four whiskey and sodas at least while LaBert was talking and I noticed from time to time that his face was growing pinker and his eyes seemed to sparkle more with each sip. Presently LaBert's story came to an end and Volking made a gesture with his shoulders, his face flushed and his lips trembling as though he had something he must say. Colonel Marsh, at the same time, seemed on the verge of speech, and I, wondering what sort of a man Volking might be and feeling that I might never know if the colonel once started upon a tale, spoke up quickly.

"I rather think Volking can cap that story of yours, LaBert," I hazarded.

There was a moment's silence and every eye was upon him. He, most surprisingly, started half to his feet, his face expressing blank surprise. He looked at me searchingly a second. "You don't happen to be a mind-reader?" he asked. "How did you know what I was thinking?"

I tried to wave off the question, but it seemed important to Volking for some mysterious reason. He grew more excited.

"Never mind how I knew," I said. "As a matter of fact, I merely guessed from your appearance. But what is your story?—that's the important thing."

"It's most extraordinary," he muttered as he sank back into his chair. He turned to me once more. "There *is* such a thing as mind-reading, you know. Mental telepathy is what scientists call it. It's fully recognized as a subject on which we have no data beyond a few empiric cases—but they are enough to prove the thing .... I was going to say something about it when you spoke. You see, I've spent the past two years experimenting with the mind electrically, upon the theory that thought emits a slight electrical discharge (as we know it does), and that this emission may have

some reaction upon the ether waves in the same manner as a radio sending station—or at least analogous to that. I made helmets of metal and surrounded them with cages of wire and tapped the gadget at a dozen places to take voltmeter readings—generally mucking about, as you see, to find out the best place to start working on my subject. I didn't get any results at all during the first year, but finally I tried a helmet so elaborate and complicated that I couldn't begin to describe it without a diagram. It had a magnetic field over all and gave me rather a headache when I wore it for more than a few minutes. With this I got a definite movement on the dial of one of my voltmeters—about a thousandth of a volt. The meter was tapped in at a difficult place to reach and I took off the helmet and fumbled around, trying to make sure which one of the half-dozen meter lines produced the result, when it fell to the laboratory floor."

Volking took a sip from his glass and glanced around at us. "You know, this is a queer story," he said, "and I'm not at all sure that it is wise to tell it to you—you won't believe it, anyway."

Five howls of remonstrance cut him short. Colonel Marsh glared severely. "No sportsman would back down after he names the stakes!" he snorted. Volking hitched himself uncomfortably in his chair. "Well—all right, but none of you is to say a word until I'm done."

And here is the story almost word for word as he told it.

* * *

The helmet seemed to have suffered not at all from the accident—it wasn't even dented on the outside. I determined to make more tests and tied a piece of string to the line that had to be investigated, my intention being to take the helmet apart later on and see what I could find out. Then I put the helmet on my head once more, sat myself down in an easy chair and turned on the current. I composed my mind to calmness and in a vague way cast out my thoughts. That is to say, I tried to think outside of myself . . . . I've said that my fiddling with wires and such was in no sense real experimenting? I was just trying any curious combination of things I could twist apparatus into—hoping that something would happen on my measuring dials. When the helmet fell, something must have bent out of shape or into contact—I barely knew its wiring scheme and a lot of it I depended upon examining afterwards when it came to writing down results. All this is important in the light of what came to pass later on.

I had hardly sat there five minutes wearing the helmet after its fall when I began to feel things going on in my head—chiefly a long sustained ringing, like a telephone bell. I glanced over at the voltmeters and saw three of them with quivering pointers. I was quite excited and vastly curious and when my vision became blurred and the walls of my room seemed to melt and run together, it never occurred to me to take off the helmet. I didn't think of possible damage to my brain resulting from my wild empiric tests. Rather, I thrilled to the idea that my eyes had been affected by the helmet and I waited expectantly.

The corner of the room at which I was staring became dark and velvety; then I perceived long folds running along it and the color became an intense glowing purple and at the same time ceased to be cloudy and shapeless—it stood out clear and sharp and I saw that it was a huge velvet curtain. The rest of the room seemed to be bathed in a faint light and to be far away and on a smaller scale of existence. The curtain was the only real thing in creation, and I stared at it tensely and felt the hairs prickle on the back of my neck.

Then clear and loud a metal gong clanged brazenly from behind the hangings. I scarcely dared breathe while the echo of the barbaric sound lasted. It was indescribably full of mystery and vague suggestion. And as it ceased to ring, the curtain trembled and a hand—a skinny claw of a hand—was thrust through and pulled them aside slightly to permit the entrance of a little old man. He was really

the most extraordinary figure . . . . scarcely five feet high and with his huge bespectacled head bobbing and nodding ridiculously about on the top of a thin gangling neck. He was dressed in black, very severe black, but a belt of gold fastening in his robe at the waist gave it a dignified and rich-looking appearance. He seemed impatient, as though he had been busily engaged and hoped to be free in a moment to return to his task.

"Well! Well! What is it?" he called in a sharp querulous voice as he peered near-sightedly in my direction.

I could only gasp. I felt my mouth so dry that I could not have spoken had I known what to say.

"Am I to be kept here all day?" snapped the old man. "Make your report and be done with it. What year do you call from?"

"Wh—what do you mean?" I managed to ask.

"Mean! Mean!" he shrilled furiously. "Could anything be more plain? What year is it with you?"

"Nineteen thirty-three," I said, stupefied with astonishment.

"I don't know what you are talking about," came the scolding answer. "Nineteen thirty-three since what or before what?"

I was puzzled for a moment and my head buzzed but I could think of nothing to reply except "Anno domini."

"If this is a joke," snapped the man at the curtain, "then it is in extremely poor taste. My time is exceedingly valuable."

"But I simply do not know what you want, sir."

He stared myopically at me and muttered some words to himself and rubbed his shining bald pate indignantly. Then his face cleared and brightened. "Ah! Have you a chart of the sky?"

● It so happened that I had one of those cardboard things they sell in the stores. It was on a bookshelf behind me and I turned to find it. Instantly I became dizzy and the things in my own familiar room seemed to recede and become smaller. I swayed unsteadily a moment and the furniture and walls behind me became normal. I reached for the chart and, turning, walked toward the purple hangings. Wonderingly, I handed it to the old man—started to, that is. There was a scintillating flash and I dropped it with a cry and stood rubbing my arm. The incident seemed to make my mysterious visitor more interested than he had been.

"Hold it up close, so that I can see it," he commanded, "but do not try to pass it to me." I did so, and after a few absorbed seconds, he nodded violently, his head jiggling absurdly on the scrawny neck. From a sleeve he produced a tablet and stylus and scratched with them a moment as though figuring.

"No wonder!" he said and sighed excitedly. "This is unbelievable! I don't suppose the chart is accurate within ten thousand years—but still! . . . . You are about twenty thousand years ahead of me; there's no denying that!"

He seemed quite delighted and at the same time profoundly puzzled. "This contact must in some way affect future history beyond you again," he muttered half to himself, "and yet no record will remain fifty thousand years after you, for that is the period of future history with which we are constantly having intercourse. Well, that's not my job, though I'd better speak to Antiochus. Come, how does it happen you have pierced the Veil?"

I grunted my incomprehension.

"I asked you how you managed to pierce the Veil?"

"What do you mean—my helmet?"

"Your thought-thrower; I suppose that is your helmet . . . . how did you happen to invent it? Don't you understand what you have done? Gods! Coincidence could hardly go further! Know then, that you and I talk—or rather *think* we talk, for no words are really heard by either of us, across a gulf of twenty thousand years! Ah! That touches your imagination, doesn't it? Yet you cannot be a savage, for I see wires and electricity were used by you. Tell me, have the ice ages passed yet?"

"*Ice ages!* Good Lord! Thousands of years ago!"

"Good! And you no longer have storms and hurricanes with constantly freezing and thawing winters?"

"No, I wouldn't say that. But the continents are no longer covered with ice—wait a minute, though. Greenland is still buried under ice. I suppose that *is* a relic of the last ice age, at that. Never thought of it that way."

"One of your continents?"

"Yes. But quite near the North Pole."

"Ah well, then you would have a constant anti-cyclone over that place and weather so variable as to make living uncomfortable far from the equator."

"But we keep indoors in cold weather and heat our houses with coal and oil."

The man started violently and his brow frowned portentously. "You mean that you burn the world's organic reserves for the warmth that is in them? Gods, what waste! Why do you not use the sun's heat and store it in warm weather to use in cold? Or your electricity; what is the matter with that?"

I stared in dull wonder. "Electricity," I mentioned, "is largely produced from coal—more and more comes from water-power each year, but a great deal is still from steam plants."

"But you are savages, after all! Have you no thought for your children and their children who shall inhabit a world without coal and oil?"

"I am very unimportant in the world's affairs," I replied, "and have nothing to say about the control of such matters. I rather agree with you, but what can I do?"

He nodded understandingly. "I must talk to a historian of the future and ask about these matters. I really know nothing of them myself. By the way, your thought-thrower is very poorly adjusted. Your signals come in like a thunderclap and there seems to be some vibration set up between your two waves that makes it difficult for me to keep my receiver focussed."

"I'm sorry," I said, "but I hardly know a single principle upon which I chanced to build this apparatus. I was merely adding wire to coil and coil to magnet, attempting to produce phenomena which I could study. It's all the merest luck and if I try to change it, I shall probably spoil everything . . . . I still don't understand how it happened nor do I understand who you are or where or why. You are living and talking twenty thousand years before me, you say—then at this moment in my life you no longer exist and at the time you lived and spoke I had no existence. These things seem incredible to me."

"Just so! Of course they do . . . . yet they need not. My hand" (he held it up) "has crumbled to dust twenty thousand years before you see it. How can you see it? You cannot do so. My voice cannot be heard by you—nor do you hear it. All that is happening is that your thoughts are being affected in a certain way so that the part of your brain which receives light waves through the optic nerves is receiving the suggestion of light waves through your thought-thrower or helmet. It is the same with that part of your brain which translates sound waves from the ears. It is translating suggested waves that give the illusion of sound. Surely you have mental telepathy in your civilization!"

"No. At least, many of our scientists insist such a thing exists and point to proofs not generally accepted by the rest of the world. In the East, in India and Tibet, there is supposed to be some not understood method for conveying thought quickly over hundreds of miles—as quickly as telegraph wires can do it in America. But while these things exist or are claimed to exist, we do not use mental telepathy nor understand it in any way. It was to learn more about it that I have made the experiment which resulted in our conversation."

"Then you understand that thought travels through space as freely as light?"

"Yes. If mental telepathy exists at all, of course thought would travel with the speed of light and with as little regard for the distance travelled."

"Correct, indeed. And it also travels through time as quickly and surely."

"That's what I don't understand, I'm afraid. You stand there receiving my

thoughts, you say, thousands of years before my thoughts exist. How?"

"Very simple: thought can travel through time—do you recognize in your science that time is a dimension?"

"Well, yes, in a sort of way—but not the same way as space."

"You can, however, call back to mind thoughts of the past or imagine thoughts of the future?"

"Hmm," said I, for this was a teaser, "I remember what things looked like and how I felt on certain past occasions. I can imagine that a perfect mind would remember all it had observed. But for the future —I guess I can. Certainly I can plan a house and imagine living in the rooms when completed. I will answer yes, but I have this ability to a very limited extent."

"No matter," replied the old man in black, "for the rest is merely improving your mental equipment and supplementing it with the proper machinery. Now, have you never gazed at relics and pictures of the distant past and imagined yourself walking down an ancient street, or taking part in forgotten battles? Of course you have. Where is your thought then?"

"Right here in my head!" I exclaimed confidently. "My thought stays here with me."

"Good! So it does. Now in mental telepathy one person thinks and another receives an impression. Where is the thought of the thinker?"

And that stumped me, rather. Certainly thought must leave one's body to be received elsewhere. It must travel through space—why not through time? I nodded doubtfully. "I understand it all now," I replied. "It still seems impossible, mind you, but I understand how it could be."

"How it could be, indeed!" snorted my visitor. "How it *is!* We two are actually performing the feat of which you doubt the possibility!"

The Socratic method of argument may be efficacious, but it irritates me—always has. It made things seem so plausible and yet I felt far from convinced. But I determined to consider the matter closed. I was talking to someone; that was certain. What he said was interesting, so let the conversation proceed.

"Please continue with your explanation," I said politely—though I felt like swearing. "You are speaking from an age twenty thousand years or so before mine. How do you come to be equipped with a device for transmitting thought?"

CHAPTER II

The Fabled Land

● Volking paused a moment in his narrative and I glanced around the circle of intent faces. Blanchard, a member I had never met, had let his pipe go out and struck a match that lit up his pale face redly. Colonel Marsh sipped a whiskey and soda with the gravity of a wooden Indian. LaBert was gazing sardonically into the fitful flare of the fire with one eyebrow raised, as I judged, skeptically. As for myself, well, the story was interesting, whatever else might be said of it.

"Go on," I suggested.

Volking blushed slightly and turned toward me. "This must sound like frightful rot," he began apologetically. "But I'll try to tell you just what happened—or rather, what was said, for my yarn hasn't one hand's turn of action in it. You asked for it, though, and I'll give it to you."

* * *

Here I was in my laboratory having a placid argument with an old man who had died twenty thousand years ago—according to him. I didn't believe it any more than you do—but at the same time, what was I to believe? The room was a plain one and familiar to me in its every corner and appurtenance. The room was set on the corner of a building and on the fifth floor and that was the corner in which the curtains hung. Behind me was the only door and on my left the only window. These things have a certain weight upon one's judgment and—well, his story appealed to my imagination, I suppose. I really began to believe him.

"Enough of such time-wasting nonsense," he cried out shrilly. "You have

called my station; what do you wish to know?"

"Who are you?" I asked. "And why do you have a station?"

"I am Marron, assistant psychologist at Imperial Atlantis. We maintain a thought station for communication with the future. We exchange daily messages with the science laboratories of the World Federation at a distance of seventy thousand years. You, in some fortuitous fashion, have blundered into our line of communication—but whether it will prove a desirable or regrettable blunder I cannot as yet tell."

"But what advantage is there in communicating with the future?"

"We are passing all our knowledge of science on to a safer age, to make sure that it will not be lost to the race. Your appearance may change all our notions, however, though it leaves two gaps of long ages to account for."

"Why do you think your knowledge in danger?"

"For the simple reason that we have never before been able to communicate to anyone closer to us than seventy thousand years. Two thousand years ahead we talk freely with our own descendants upon the Atlantic continent. After that comes silence—silence for nearly seventy thousand years. From this we deduce that some disaster will overtake the race and that no men of science will be left capable of making a thought-thrower. Our geologists and astronomers tell us that the world will inevitably undergo another period of intense cold and be covered with ice except, perhaps, for the equator. We therefore deduce from these two premises that civilization will be destroyed and will not revive for seventy thousand years. At that time we know the race will have mastered most of the secrets of nature and, to tell the truth, we are learning as much as we teach—perhaps more. Yet the nature and the date of the doom that is to overtake us remains unknown. The distant future has no record of our existence—their written history dates back to a time of suffering and warfare from which their present civilization emerged by bloody revolution."

Needless to say, I was enormously stirred by this speech. Atlantis! At least I could give him the story of its downfall!

"Our history, Mr. Marron, tells of the island of Atlantis which, thousands of years ago, sank suddenly into the sea. A few escaped into Europe and, according to local tradition, taught the inhabitants of those countries which received them the arts of husbandry and engineering."

His eyes grew large as I spoke and his manner eager. "Are you sure?" he snapped excitedly. "Atlantis will sink into the ocean, you say? It is incredible—how do you know?"

Then I had to admit that the whole account was legendary in the extreme. "Most of our historians will not admit that such a place as Atlantis ever existed, sir. A man called Plato wrote an account of the sinking from memory. He had heard the story from his grandfather, it is said, who had been told it by Egyptian priests. The priests—well, it was traditional knowledge with them and was thousands of years old even then. So, you see, I can't swear to the truth of the matter in any way."

"Gods! If I could be sure! But the settlements in America along the Great River—what is supposed to have become of them?"

I stared. "No traces exist of such settlements today—archeologists trace human occupation back three thousand years at the most."

He nodded sombrely. "Yes. It is possible. No one really makes his home in the colonies—that's a great fault of my race. We are Atlantean and we are not content to live more than a few years away from the circular lagoons of our own city. America for the metal mines and back when the years of service are complete—it's true enough . . . . Pardon my abstraction [he seemed to be thinking] but . . . . sunk into the ocean. Have you never explored the ocean bed—it must be shallow over sunken Atlantis? Can the White

Mountains of the North be covered with water?"

"Certain islands in the North Atlantic are supposed to be the tops of Atlantean mountains," said I. "Their sides run steeply down into very deep water."

He bowed his head in silence for a moment. "It would account for it . . . . it would indeed. First Atlantis vanishes and in the long fight of a few survivors against nature, science sinks beyond recovery." He looked up at me and his face was twisted with sorrow. "You do not know, young man, how sad your words make me. I do not doubt that they are true in general — but no doubt legend has twisted the events into a story of drowning. Possibly it was an earthquake; perhaps volcanic action or a fall of meteors struck our city and destroyed it. What does it matter? That it is doomed, we know. No man can change what is to be."

"But surely," I exclaimed, "if you know what danger to expect, you can provide against it and prevent it!"

"How so? Your legend is that Atlantis *did* sink. We were evidently *not* prepared or science and civilization would have continued uninterrupted."

"But what use is it to know the future if you cannot provide against it?"

He laughed mirthlessly. "What good to know the past, if you cannot change it?"

My head was in a whirl of new ideas and half-explained hints. I had a dozen more important questions to ask but promptly forgot them, for this seemed to me such utter nonsense.

"What has happened is all over and can never be changed—what is to come has not yet been determined. Of course you can change the future."

He peered at me sourly. "A mighty popular fallacy," he snapped, "but fallacious for all its popularity. If we are warned by you that something will have happened to our island twenty thousand years from now and if we take precautions, as you put it, and prevent that happening, then will your history books be miraculously rewritten in a flash of magic to read in accordance with the change?"

● Well, you know, of course that made it look different. Their civilization would be lost—for where is it today? Sunk with Atlantis. But it seemed hard to understand. I said as much to the old man and he nodded.

"The future," said he, "is laid out in a pattern altogether unchangeable. It is a projection based upon what is. You seek to change it by, let us say, performing some act that seems to you to have been utterly illogical—such as could not be drawn to any pattern. Fool! That act was itself foreshadowed. Let me illustrate: only a few years ago we succeeded in communicating with the distant future. We had a long conversation during which we were informed that we should be in communication with the speakers' ancestors hundreds of years before he was born—for it was so recorded in his histories. And, thereupon, we did succeed in contacting a station several hundred years closer to our own. Which of the two conversations came first? From our point of view, here in Atlantis, we talked with the year 71,000 before we reached the year 70,000 on our thought throwers. From the other end it appeared, of course, that the first contact was made a thousand years after the second one. Both were matters of recorded history—hence could not be avoided nor changed. One man's future is another man's history and for this reason, the future is unalterable. To say a thing might have been is inaccurate—if it did not happen, then it never could have happened. Yet," he added with a half-smile, "I must confess these conclusions are based upon no law of nature that we have found—they are merely arrived at by reasoning upon such data as we have before us. Possibly further knowledge may change our ideas slightly, though I doubt it."

I waved my hand in a gesture of assent, feeling that anything was better than wasting more of this extraordinary opportunity upon pure metaphysics. What

was the history of Atlantis? How did it originate and what sort of people were they? Was their science as enormously advanced as it seemed to be? Had they airplanes and automobiles? All these and a dozen other questions were crowding around in my mind, but the one I picked on first was the most puzzling—Marron had said that their scientists could foretell the ice ages then approaching. How?

"What causes an ice age, Marron? Our scientists have a number of conflicting theories. You say that your scientists have prophesied them."

"Come, come! Scientists, do you call them? What could cause them but the moon? The sun keeps shining—not always with the same strength of heat, it is true, but without enough variation to cause an ice age. The earth cannot escape that steady flow of heat by itself, certainly. What else is there? The moon, of course."

"The moon! How?"

"Have you no astronomers?"

"Thousands — constantly watching the heavens through telescopes."

"Then it must be known that the moon's orbit is irregular and variable."

"Some exceedingly minute changes have been noticed."

He stared in amazement. "Certainly then it must be a different moon from ours. Right now the distance from the earth is increasing slowly, year by year. The moon circles the earth in about ten weeks . . . ."

"It takes four weeks with us and has always done so," I interrupted.

He nodded. "When it acquires a sufficient distance of radius from the earth so that it rotates in six months or more, it will provide a continuous eclipse during the summer months for either the northern or the southern hemisphere. Our scientists believe that it will be the northern hemisphere. If it continues to recede from the earth until it circles the planet in twelve months, a large portion of the sun's rays will be constantly withheld from the earth. We do not know yet just how far the movement will continue, but one thing is certain: a sunless summer could never melt winter's accumulation of ice. The next year would see still colder weather and for thousands of years the cold would increase and the ice caps spread down from the northern pole. Do you understand now, man of the future?"

I knew better by now than to argue the point, though I thought and still think there are flaws in that reasoning. "And is that the whole cause? We are noticing periodic changes in the amount of heat that flows from the sun and supposed, among other things, that the ice ages represented a period of little solar radiation."

"There are such changes with us, also, but nothing we have observed would indicate that solar heat variations alone could endanger the world—the moon, however, is predictable . . . . I should like to talk to one of your astronomers, but first I must learn something of your civilization. Tell me," he said . . . .

[Volking turned toward us in the firelight and raised his placid eyebrows.] There's no use retailing this part of it [he said]. The old man asked questions about every mortal thing, and I answered him, so far as I could. First he wanted to know how we were governed. When I said that we had self-government, he seemed to froth at the mouth.

"Tribal rule!" he shouted. "Savagery in its lowest form—I suppose you count heads and the side with the largest number of votes wins!"

"Of course," said I. "We have a democracy."

"And how about your people of low intelligence—without training or education? Do they rule themselves, too?"

"Every male and female child is educated by compulsion."

His eyes fairly popped out when I said that. "But how can they be? Three quarters of any race is unfit to think for itself. Do you teach your criminals and peasants the secrets of science? They will use its power blindly and destroy you!"

"They haven't so far," I replied, "though a peasant government armed with

scientific weapons is not a pleasant thing to contemplate."

"Well . . . . this is childish . . . . how is the world's labor apportioned?"

"You mean what each man shall work at? Of course, well—he can take up any trade he wants to try; or he can go to college and study for any profession he is able to qualify for. Is that what you mean?"

"Partly . . . . partly . . . . Gods! And if there be too many physicians and not enough blacksmiths?"

"Then the physicians make less money and some turn to other work; the blacksmiths are paid so highly that many men adopt that trade. Just demand and supply."

"And if too much grain be grown by your peasants—who tells them to plant less the next year?"

"Hmm! They cannot sell it, so they can't afford to plant more. That's the theory, but to tell the truth, we've just been going through a period of too much grain. The peasants (we call them farmers) didn't stop planting grain soon enough and there was too much for three years in succession. They borrowed money to grow grain when the granaries were filled with last year's still unused. They could not repay the money and broke down the trade and industry of the whole country by that failure. Millions were unemployed and starving."

"Starving—with too much grain?"

I gave a short laugh, for the paradox is an old one.

"You are joking," said the old man simply. "There is no such mad civilization as you describe and never will be."

"How are these things managed in Atlantis?" I asked politely, determined not to argue.

"As they should be!" he snapped. "We are ruled by the ten kings on the throne of Neptune. We have few laws, for each new one must be approved by the kings and afterwards written on a sheet of gold which the lawmaker must pay for. It can never be changed. By those laws are we governed, whether we like it or not. Our children are observed carefully from an early age and those that show special aptitude are taken apart and educated while the others are trained to whatever craft or calling best suits them—usually that of their father, for heredity and environment are strong molders of character. When there is too much grain, the peasants have a holiday. There are none unemployed, for are there not always canals to be dug and buildings to be labored upon? Food, shelter, and clothing are given to every man who obeys the laws. What could be simpler?"

"Sounds all right," I commented, "but our farmers have automobiles, radios, and gasoline tractors. Mere food and shelter don't make much of an appeal to them."

"Ah! You told me that you were burning the coal and oil you found in your country. While it lasts, your people will, of course, enjoy great material wealth. We could have done the same—suppose we had? Suppose we in Atlantis had scoured the earth and burned up all its natural resources? Could you still have your peasants living like lords?"

"I suppose not—although we soon will have enough electric power from waterfalls to provide all the power we need for luxurious living. I am not defending my own age, you know, merely answering your questions."

He grunted and thought a minute. "Well, it is extraordinary to think of. Your scientists, then? What sort of work do they do? You tell me little is known about things mental. Do they study the physical body?"

I told him what I could of our science. My head was aching horribly, but it never occurred to me to remove the helmet. In fact, it never occurred to me to do anything or say anything that the old man had not asked me to do or say.

CHAPTER III

A Trip Through Atlantis

● Volking paused again and someone handed him a whiskey and soda which he sipped thirstily. "It sounds like a story that goes on forever and never gets any-

where," said he. "Well, it got somewhere, all right—though I'm not quite sure where. But I don't want to skip on to the end before I give you a complete picture, for it seems to me that it all ties together—everything he asked and everything I told him. You see, I thought when I told him about our scientific progress during the last century that he would be impressed and beg me to explain how a radio worked and all that sort of thing. You know, like showing Julius Caesar a modern tank with machine-guns mounted—ready to mow down a whole army of barbarians." Volking stared soberly into the fire a moment.

"He wasn't impressed—not the least bit," said Volking, and continued his tale.

* * *

When I thought I had opened the gates of knowledge to old Marron and sat back a bit in my chair, feeling rather proud of our modern achievements, he grunted.

"Gods!" he said. "It's like a machine run mad. Your whole labors have been aimed at transportation—steam engines, automobiles, and airplanes to carry you about faster and faster; telegraph, telephone and radio carry your words here and there with the utmost possible speed. What on earth can be the use of that?"

"Transportation and civilization go hand in hand," said I, quoting.

He only stared. "Stupid remark! Civilization is a student in a laboratory—a scholar in a library. If your inventors had been rushing around the earth in aeroplanes and listening to radios, they would never have had time to invent."

He had the queerest ideas I've ever imagined. They sounded like sheer absurdities, and yet, when I came to study them over, they made some sort of sense. What does transportation do?

"But transportation makes mass production possible," I put in, suddenly inspired by a thought, "and in addition, we have literally hundreds of machines for lessening labor and freeing mankind for other tasks."

He nodded. "Of course—what tasks? What does your leisured peasant do with his free time?"

"Well . . . . some study and . . . . mostly they amuse themselves, of course."

"Exactly! So you agree that the free time is usually wasted?"

"Well . . . . perhaps—but later on, maybe . . . ."

"Human nature will change, you think?"

"Oh yes! Bound to change!"

"Wish fathers thought, young man! Human nature will change if the race evolves. You still have two ears, two legs, and one nose!"

"Well, suppose the free time *is* wasted. What of it?" I asked impatiently.

"Then, of course, the machinery and inventions that produce wasted time are also wasted — useless — absurd, childish foolery."

"Oh come, sir! What would you have scientists do, then?"

"Devote their time to important things —how to improve the human brain and body. That is most important. How to sway human nature toward the good things—the important things. That is vital. Then, with everything under control, how to remove from the race all traces of stupidity, disease, passion, laziness, and greed. With that done, time enough to turn to material things and free mankind from mechanical tasks of all kinds and turn the whole force of the race upon the one problem that still baffles imagination —what life is and why does it exist!"

"Go on!" said I, becoming interested in spite of myself. "What then?"

The old man's face gleamed and his eyes shone with enthusiasm. "Then! We shall be as gods holding mastery over all things —what our will desires, that shall we accomplish!"

He stood with lifted face a moment and the light went out of his eyes. "Meanwhile, suppose you show me around your city. I should like to see for myself the things you describe—not that I consider them important, but they are doubtless clever and should be of some value to Atlantis."

"Show you about! Can you then leave your curtains and walk around?"

"Of course I can! I can go wherever you take your helmet."

"Ah, but that requires electricity and I have it plugged in to the house circuit."

"Not portable? Well, you can fix up a portable source of current the next time we converse—no matter."

"But," I said with sudden excitement, "is *your* apparatus portable? Could you show me around Atlantis?"

"I can and will," said the old man, and my heart seemed to jump up and hit my ribs at his words. "As a matter of fact, you must be presented to the throne of Neptune anyway and we will make that an excuse to walk through the city and up the royal hill."

I rose to my feet and started across the laboratory floor toward him, but he stared in surprise and smiled. "You cannot come with me *physically!* Only your thought can come! Sit back in your chair and you will see."

I sank back, my eyes glued upon the curtains. The old man raised his hand and vanished behind them. There came another stroke on the gong that rang out wild and clear and the curtains stirred and commenced to roll aside. It was like the opening of a play at the theater—but much more thrilling. I was to see Atlantis!

What actually happened was startling, for the drawn hangings moved toward me and beyond them was a room—severely plain with a blue line running along white walls—and the room moved toward me! I saw Marron's black velvet back with the gold belt and I seemed about ten feet from him. He was walking away from me and yet never got any farther. Instead, the world he walked through seemed to move past me while I sat spellbound in my laboratory chair; an odd and curious sensation, like riding through a city in a vibrationless vehicle. But it seemed real! The wind blew in my face from the sea beyond the distant outer harbor; I smelt the freshness of a spring morning; I heard the *klop klop* of unshod horses in the streets, the babble of a long-dead language and the creak and rattle of gears from the shipping in the near-by docks. Of course I know I could not have heard these sounds actually—I heard by mental transfer precisely what old Marron heard as he walked slowly along, his hands tucked like a Chinese mandarin's into his sleeves.

Atlantis! Ah, what a city—what a sight it was! If I were only an artist, damn it, and could paint what I saw instead of putting glory into mean, crawling, inexpressive verbiage! But I'll try—

We passed through a square-arched doorway of stone and looked down a short flight of steps upon a broad street that ran right and left. It was a vantage point from which, over the white flat buildings facing us, we saw uninterruptedly to the inner harbor. It was a curving belt of water—wide and placid—and beyond it buildings rose again and green trees among them. Then came the middle harbor, another more distant width of land, the outer harbor, the sea-wall, and the Atlantic. Each belt of land and of water made a sweeping circle except that, on my right, the sea-wall merged into the shore and beyond stretched the continent—one flat plain to the horizon.

● But the colors were what hit you first—roads and walls and buildings all of sheer glistening white and the clear green of foliage around their base; water so blue and level, ruffled and rippled with wind and whipping so that it gave no reflection of the land zones but seemed made of velvet—and looked as solid a blue, too. The buildings facing us were near enough to see in detail and I noticed how aptly the bottom row of stones were deep blue in tint, while all the rest were white—blue and white with green of trees! I have never seen a more restful and cool a scene—yet it lived! The streets were thronged—mostly by Negroes naked except for a loin-piece of white or gray cloth. Here and there were bronzed almost-white men dressed in long white robes, bordered around the bottom with a broad blue band. There were many degrees of color be-

tween the black and the white, in all possible variations of hue and physique, but the Negroes stepped aside to let the tall stately robed figures pass and, once or twice, Marron's black robe swept past subservient white men—so I had a very fair hint of the social gradations without being told. Me they seemed not to see, nor could I see them once Marron had passed them. A misty wall of gray swept along beside me and once when I turned around to look at the harbor, I found that the gray mist hemmed me in. I could hear all the noises of a busy city from behind the wall (Marron's ears, you see) but could see nothing. It was a weird and frightening experience and I kept thinking of the mist as a visual expression of the wall of years that separated me from the scene. I even got myself into a state of mind where I half-believed I was lost in the centuries—in the river of time—doomed to roam forever spaceless and formless. Then suddenly the gray vanished and the city flashed sharply into view. I turned in my chair and saw Marron with raised eyebrows looking at me.

"You cannot see anything I am not looking at. It would be more profitable for you to look toward me, I should think. We are coming into view of the royal hill now —look!"

He turned and the wall of gray that had seemed to hem *him* in gave way to a breath-taking sight. Steep and picturesque there rose many hundred feet into the air a rocky hill of reddish hue. Grotesque shapes of shrubs and gorgeous cascades of flowers adorned its flanks. At the top gleamed and sparkled the stupendous temple of Neptune—one mass of polished gold! It was a pyramid, so proportioned as to carry farther upward the slope of the hillside and around its base half-hidden by trees were dozens of red and white buildings of the utmost delicacy of design. But the great golden pyramid was dominant—huge and yet graceful, with its smooth sloping sides sharply etched against a clear sky in which a few fat clouds billowed whitely.

Ah, that city! How little I saw of it and how poorly I can tell of what I saw! We were twenty minutes going from the room of the curtains to the top of the Royal hill—a distance of a mile. I can only remember glimpses and snatches: Once we passed twenty black slaves dragging a block of stone through the street on a wooden sled. The sweat ran down their bodies and the muscles of their legs stood out like whipcords. The overseer struck them twice with a long leather whip —struck out blindly and coolly and uttered a short sharp command—and the stone ground forward like a live thing each time. The broad streets were of cut stone and ran from wall to wall without a sidewalk, but on each side was a gutter a foot or more deep and water ran briskly there, not the least foul, though it carried the sewage of the city. The houses were crowded tightly together and were never more than two stories in height. There were no glass windows—only square apertures in walls, though these were often laced with wooden lattice and, once or twice, with bronze bars. The shops we passed advertised their wares by placing them in these windows and I saw a varied collection of the products of the country —wine jars and barrels, cloths of all descriptions, jewelry, fruit, freshly killed sheep and fowl, armorer's shops with helmets, spears, swords, and shields of bronze, carpenters' shops with gloomy interiors filled with the sound of chopping and scraping and curiously uncomfortable looking beds and chairs visible through the doorway. Once we rounded one corner of a large vacant square, muddy and unpaved, where horses were being trotted about and auctioned off—short and stocky animals they were, but full of spirit and giving the boys who held their heads a lively time of it . . . . Oh yes, then there was the tannery—a foul-smelling place—with a long wooden gallery on which a dozen slaves sat working over the leather with an open vat before their noses . . . . and the horses we passed with fierce-looking riders urging them to break-neck speed and the devil take the man who couldn't get out of the way! And twice

we saw crude two-wheeled chariots. They must have been war-chariots, for their sides were covered with leather and studded with bronze nails and the drivers wore metal helmets. Once Marron paused at a street crossing and we watched a little procession go by.

First came two horsemen and after them a chariot in which an armed man stood stiffly at attention. They made slow progress, curbing the horses tightly, and were followed by sixteen men on foot—armed with spears, javelins, bows, and slings and two ponderous giants with helmets and shields.

"It is a leader's following going for yearly service. The great plain supports a large population and ten thousand such followings are at the command of each of the ten kings of Atlantis. See the last four? The woolen jackets with the trident on the sleeve marks them for sailors who will do service with the fleet."

There! I haven't said a word about the ships. They were tall high-sided affairs with row on row of holes in the freeboard out of which stuck incredible numbers of oars—triremes, I guess they would be, for there were three rows of oar-holes. High in the nose and at the stern and low in the middle—with one stout mast and on it a sail, they were. And in the whole harbor were hundreds such ships and no two sails were of the same color—purple and pink and green and black and cerise and violet and sky-blue—there was color enough! The ships themselves were dirty brown and gray except for an occasional gilt figure-head at the prow. Then there were innumerable small craft with lateen sails or oars to propel them hither and yon over the water. And the docks were of stone—solid ponderous barns filled with bales and barrels and the sight of human activity.

The road up the royal hill circled twice around it as we ascended and from this height I could see in all directions and get a clear plan of the city. It lay, I judged, originally on a promontory jutting into the sea. On three sides it was surrounded by water and on the fourth side—the southwest—stretched away a great plain mile upon mile. The harbors were circles of water alternated with circles of land through which were cut connecting channels. On the north, clouds seemed to be banked white and serene and it was a full minute before I could believe otherwise. They were snow-capped mountains standing distant and pale in the sky—but to what incredible heights! Between the city and the mountains was a large arm of the sea and far away on this sailed a ship with a purple sail. I wondered where—to Britain for tin or perhaps to America for copper? We kept circling upward and came in sight of the southern plain once more. I observed a dark line running like a road of enormous width out of sight on the sun-drenched horizon. Marron saw my interested look.

"That's the irrigation ditch," he said. "It circles the whole continent and all our rivers empty into it instead of wasting their water in the ocean. In the dry season we draw it off to give us better crops."

"But its *size!*

"It must carry all the water of all the rivers of Atlantis! It is not yet finished, but it has taken two thousand years already in building." And he set off once more up the hill and I (though I would have stayed and looked for hours) kept sliding along in my chair ten feet or so behind him, willy-nilly, with the impenetrable wall of two hundred centuries hemming me in behind.

CHAPTER IV

An Inevitable Doom

As my guide's steps brought us near the top of the hill, we saw more closely the bizarre and barbaric plan of the palaces and temples with which it was set about. Stones of red, of black, and of white were used to give still greater variety to the towers and pillars and flying arches that sprang into view everywhere among the grotesque forms of the shrubs and trees that covered the ground with green and brown and purplish foliage. At one place, a half-concealed arch set in the side of

the hill showed where one palace had been built underground and the greatest care had been taken to preserve a wild and natural appearance about the entrance. A few feet above the arch and to the left was a smaller aperture in which a woman with long coppery hair and dressed in a robe of glistening white fabric sat sunning herself on cushions. The face was beautiful and the half-closed eyes followed my guide lazily a moment and then lifted to look out upon the spacious scene of city and continent that spread before her. Me she did not, of course, see .... I seemed to pass so close that I could have reached out and touched her, but when we came abreast, the fog of the time-wall shut her out and ghost-like from its grayness, I heard a sigh.

Then we came into full view of the temple of Neptune and I gasped at the shining splendor of it. A triangular doorway of spacious design was set in the center of each of the four sides and the purplish gloom within was warm and mysterious in contrast to the brazen gilt of that huge pyramid. Three men in black, with gold belts, turned in toward the nearest arch and vanished into the dark interior as we approached, and almost immediately a magnificent white bull sauntered insolently out into the sunshine and started toward us. It came right up to old Marron who stepped respectfully aside (I sliding sideways in my chair) and I heard a snort from the misty nothingness into which it stamped.

Then we too approached the dark entrance and just before we entered came in sight of a lake hidden between two folds in the hill. The water was so blue that it almost hurt to look at it, and reflected in its mirror surface was a white-columned temple of exquisite proportions flanked with green trees. To break that reflection, two scarlet flamingoes swam slowly around and around. Over all was the utmost quiet and peace — so that I heard the sandaled feet of the old man before me shuffling in the white dust of the roadway. I had that one last glimpse —then the massive stone archway slid around me and I could see nothing until my eyes grew accustomed to the gloom.

The ceiling was fifty feet above us and supported by ten square columns of gold on which was engraved writing of some sort—I have never seen any quite like it. In one corner was a dais (also of gold) and ten richly ornamented thrones—one raised higher than the others. Five or six black-robed figures were visible in the vast reaches of the temple and two white bulls —one lying sprawled on the paved floor.

"We will not have long to wait," said Marron, turning to me. "The ten rulers of our world will be here in a few minutes. Meanwhile, look about you—for you will never see the like of this again. On the pillars are carved the laws of Atlantis, unchangeable, just, and humane. The metal is electrum—gold and silver alloyed. The entire wealth of the world is brought to this temple. Up above our heads are rooms and passages by means of which our astronomers read the sky. Here is stored the knowledge gathered by our science priests during all past time. To the ignorant rabble of the city, this is the temple of Neptune whom they worship; in reality it is the seed germ of racial thought and learning. The white bulls are sacred—future sacrifices to the gods, a necessary sop to superstition."

I was too awed by my surroundings and too much occupied with mere looking to ask questions. Before I had looked my fill, there was a stir at the archway to the left of the thrones. Ten men entered in single file and behind and around them a dozen or more priests. The ten men were tall and straight with exceedingly white faces and long beards—it may sound queer, but every man had red or golden hair. Their robes were of the deepest imaginable purple hue—all exactly alike. On their feet gleamed sandals of gold encrusted with jewels. Slowly they continued their stately procession over to the thrones and sat in them one by one until the ten seats were occupied. Then the priests handed each man a crown which he placed upon his head and the king in the highest throne was handed a scepter bearing a trident

upon one end. This he raised in the air and the other nine kings bowed their heads while the priests, including my guide, bowed their bodies almost to the ground.

I sat forward in my laboratory chair interestedly.

"Rulers!" said Marron, "I have to present a man of the two hundredth century after us!"

Then, suddenly, I knew that I was visible to the ten kings and, not knowing what else to do, rose to my feet and bowed self-consciously. In response, they inclined their heads and the king spoke over all:

"Welcome to Atlantis, man of the future! This is a welcome surprise, but how can it be explained when the records of the future make no mention of your appearance before us?" And he frowned doubtfully.

"We have nothing to learn from their customs, ruler," put in Marron.

"How then has a savage solved the problem of constructing a thought-thrower?"

"Their science is directed by madmen or apes so that its power is greatest in unimportant things. Yet their fingers are skillful and their minds curious and busy. By chance, this one man alone came upon the secret — and he himself knows not how!"

"But this is unseemly! Why have you asked audience?"

"Because of a legend current in his age concerning the fate of our beloved city."

There was an instant stir and rustle among the ten kings and their eyes were fixed intently upon me. "Tell!" commanded their ruler.

Well, you know, it suddenly struck me as absurd—the whole thing. They were so stiff and formal and domineering and they judged our twentieth century civilization so off-handedly that I rather resented it. After all, I thought to myself, this whole scene is not credible: I'm dreaming, I suppose. I laughed and the ten pairs of eyes stared coldly at me. Then I suddenly felt sorry for them—dreams or not—and told them what tradition remains about their civilization.

"It is written in the folk-lore of a dozen countries that once a great race flourished and was drowned in the sea. Some accounts of the more savage and ignorant races are not clear nor trustworthy, but one account names that country Atlantis. It says that the land sank and the water covered all and the nation perished save for a few men who escaped to the shores of Europe and along the Mediterranean Sea. This account places ancient Atlantis on a huge island in the Atlantic—ringed on the north by tall mountains. Today—in my own age—the Atlantic is deep but a few groups of islands thrust up still above the surface of the sea—on them has never been found any trace of former buildings. So little is known that many of our scientists deny that an island called Atlantis that was inhabitated by a civilized race ever existed."

● There was a long silence following my words. Then one of the lesser kings spoke:

"What is to be, can never change."

"Moreover, he is a savage," put in another.

"In all the world no continent is so firm as Atlantis—nor set about with such massive mountains," remarked a third.

"Not only that, but besides being improbable, his story is admitted to be only a fable," said the king who sat above them.

"If it were true, we could establish colonies even stronger and more populous than now," suggested the first king.

"Both in Egypt and in America our colonies suffer from the people's longing to return to Atlantis. We could do no more than we are now doing," said the second.

The ruler of Atlantis held up his trident. "What you say, stranger, is almost incredible to us who know what rocks the continents rest on. Yet if it be true, we cannot prevent it—nor can we do more to preserve our knowledge from destruction. But your prophecy itself would run like a flame through the minds

of our people, causing rebellion and fear. It must never be known to them."

"Suppose in his aimless experiments he should throw his thoughts to another later age here in Atlantis that might use his prophesy to sway the populace—all priests are not as faithful as Marron!" And having spoken, a huge red-bearded king nodded his head very determinedly.

"True," said their leader thoughtfully. "And our command can have no force upon this stranger. His prophesy is a dangerous thing, not to be lightly considered."

"Yet his thought-thrower was made quite by chance," said Marron softly. "Could he remake it if it became broken?"

"Have you the strength of will needed?" asked the king, and he looked at Marron with secret meaning.

"I have been his guide almost a full hour, O ruler," said the old man.

"Let it be law as desired," said the king, raising his trident. The ten pairs of eyes became fixed expectantly upon me. I sat there looking back, trying for the life of me to decide what they meant. I was about to ask when Marron turned to me and stood blackly against that sudden blank wall of gray that shut the ten thrones suddenly from my sight. Marron raised his hand and pointed his finger sternly at me. I was startled.

"What is the matter—have I done something to break one of your laws?"

He did not answer and I gazed at him puzzled and fascinated. His eyes were jet-black pools and lights glowed in them. I found myself staring almost against my will and the eyes grew larger, or seemed to, and the wall of foggy emptiness began to swirl around me and him. Now it covered his feet from sight and crept up his body until presently I saw only his white, stern, powerful features. Time ceased to be measured in minutes and seconds but flowed on in a continuous unmeasured stream around me and I could hear nothing and feel nothing. There were only two blazing eyes—like twin stars reflected in two pools of black ink. A wind seemed to whistle around me and I was lost in oblivion—seeing nothing. I felt curiously light-headed and tenuous, as though I had no body — only a mind that thought dreamily and placidly of all I had seen.

I do not know how long it was before I saw some lines in the gray fog. They began like a drawing and then detail after detail was filled in and I saw that I was looking down into a room. It was familiar, but I did not remember where I had seen it before. A bench was littered with wires and batteries and tools. There was a carpet on the floor and one window. In a chair, I saw a man, his hands quietly resting on the chair arms. As I looked, he rose to his feet and, reaching up, tore from off his head a complicated helmet that looked like a huge bird's nest in a cage. Down to the floor he hurled the thing and began stamping upon it, bending and twisting it out of shape. He seemed to be in a fury of haste and took up the chair he had been sitting in to smash it down on the already hopelessly shattered apparatus. All this while I had been drawing nearer and nearer and I was inside the room when the man fell forward and lay silent upon his face . . . . I don't remember anything more. When I woke up (or recovered consciousness, or whatever you call it) I was lying on the floor of my laboratory. The chair lay smashed beside me, and so lay every bit of apparatus in the room.

* * *

There was a full minute's silence, there in the club lounge. The fire had died down to a red glow and the comfortable darkness had closed us in around it.

"That's all the story there is," said Volking.

"Hmm!" said Colonel Marsh, switching on a lamp that stood beside his chair and looking tentatively around at the rest of us as we sat up, blinking in the sudden light.

LaBert's face expressed puzzlement. "Somehow," he remarked, "I believe the damn' thing happened. Now why should I?"

"Because it jolly well *did* happen," answered Volking warmly.

(Continued on page 238)

New Readers — Get Acquainted with

SCIENCE-FICTION

WHAT IS IT?

Science-Fiction, as the name implies, is a combination of fact and fancy, theory and adventure. Fans often use the coined word "Scientifiction" as a nickname and abbreviate it "stf" or "s-f."

HOW OLD IS IT?

No one knows the date when the first Science-Fiction story was written. Edgar Allan Poe, H. G. Wells, Jules Verne, Garrett P. Serviss, Edgar Rice Burroughs are the masters of the art that have lived during the last century. However, it was not until 1926 that Hugo Gernsback organized the subject and gave it a distinction from all other types of literature.

WHO READS IT?

Among the people who read Science-Fiction are famous world-renowned scientists and other men of learning — Mr. Everyman and the adolescent youth.

EDUCATIONAL

Science-Fiction is the *only educational literature in the world*. Readers receive a miniature education by reading stories of this type.

INSPIRATIONAL

Theories are advanced in Science-Fiction — logical, but unproven theories — which inspire young experimenters to test them, sometimes making momentous discoveries that revolutionize many branches of science.

IMAGINATIVE

The readers of Science-Fiction acquire a vivid imagination in perusing the stories. There is a deathless, unlimited realm in which the mind may wander — through space and time and dimensions.

ABSORBING

No other type of literature can hold the attention as rigidly as these stories of the alien, of things unearthy and fantastic, so relieving from our modern workaday world — so different from the cut-and-dried material in other types of fiction.

ENTERTAINING

Science-Fiction does not lack the action and adventure and emotions that the human mind craves. Thrills and chills appear frequently, as they should, but they are not overdone. Science-Fiction has no place for pure blood-and-thunder.

VARIED

Perhaps one of the main virtues of Science-Fiction that holds the readers as everlasting devotees is the great variety of plots that is available in the stories. There is absolutely no limit to the number of them — while all other types of fiction are always limited to our little earth, the entire, unbounded cosmos is the playground of Science-Fiction.

HABIT-FORMING

Once a person starts reading Science-Fiction, it soon grows like a habit-forming drug. If you read only a few stories, you will not have much trouble in breaking off — but the more you read, the more attached to it you will become, until you will find yourself unable to break away — you will feel lost without it and wait impatiently every month for your dose.

GET ACQUAINTED

If you are a new reader of WONDER STORIES, you will undoubtedly want to know more about Science-Fiction. We advise you to join the SCIENCE FICTION LEAGUE (see the rear of the magazine) which does not cost you one cent. Through the LEAGUE you will meet people who have read Science-Fiction for years — veteran fans — who will let you know what it has done for them. Science-Fiction, though still young, is the greatest literary force in the world — WATCH IT GROW — and grow with it.

THE EDITORS.

(Illustration by Paul)

But suddenly things came drifting along—small, transparent spheres, for all the world like glass tennis balls!

A MARTIAN ODYSSEY

By STANLEY G. WEINBAUM

● Jarvis stretched himself as luxuriously as he could in the cramped general quarters of the *Ares*.

"Air you can breathe!" he exulted. "It feels as thick as soup after the thin stuff out there!" He nodded at the Martian landscape stretching flat and desolate in the light of the nearer moon, beyond the glass of the port.

The other three stared at him sympathetically—Putz, the engineer, Leroy, the biologist, and Harrison the astronomer and captain of the expedition. Dick Jarvis, of course, was chemist of the famous crew, the *Ares* expedition, first human beings to set foot on the mysterious neighbor of the earth, the planet Mars. This, of course, was in the old days, less than twenty years after the mad American Doheny perfected the atomic blast at the cost of his life, and only a decade after the equally mad Cardóza rode on it to the moon. They were true pioneers, these four of the *Ares*. Except for a half-dozen moon expeditions and the ill-fated de Lancey flight aimed at the seductive orb of Venus, they were the first men to feel other gravity than earth's, and certainly the first successful crew to leave the earth-moon system. And they deserved that success when one considers the difficulties and discomforts—the months spent in acclimatization chambers back on earth, learning to breathe air as tenuous as that of Mars, the challenging of the void in the tiny rocket driven by the cranky reaction motors of the twenty-first century, and mostly the facing of an absolutely unknown world.

● It is a most curious thing, and no doubt one of the greatest wonders of our wonder stories, that practically all authors have an idea that future explorers will step into another world and find conditions like they are on earth. They picture human beings with two feet and two legs, two eyes, etc., just as we have them here, although the chances are not one in a million that such conditions will even remotely prevail. Biologists are pretty much unanimous on this point, and feel that if there is such a thing as intelligent life on Mars or Venus, it certainly will be radically different from the human life that we know here.

On our own earth, we find the most grotesque animals and the most grotesque insects, some of which, like the ants, are endowed with extraordinary intelligence. Imagine a human being, reduced to the size of an ant, being brought into an ant hill and what his chances would be to really understand what was going on. It might take him years before he would even get an inkling as to what it was all about.

Our present author, fully conscious of this thought, has written a science-fiction tale so new, so breezy, that it stands out head and shoulders over similar interplanetarian stories. The mere fact that he keeps you guessing is the main charm of the story, and this, coupled with the lighter vein in which it is written, makes it all the more charming.

We are prevailing upon the author to let us have a sequel, which we hope to present soon.

Jarvis stretched again and fingered the raw and peeling tip of his frost-bitten nose. He sighed again contentedly.

"Well," exploded Harrison abruptly, "are we going to hear what happened? You set out all shipshape in an auxiliary rocket, we don't get a peep for ten days, and finally Putz here picks you out of a lunatic ant-heap with a freak ostrich as your pal! Spill it, man!"

"'Speel'?" queried Leroy perplexedly. "Speel what?"

"He means *'spiel',*" explained Putz soberly. "It iss to tell."

Jarvis met Harrison's amused glance without the shadow of a smile. "That's right, Karl," he said in grave agreement with Putz. *"Ich spiel es!"* He grunted comfortably and began.

"According to orders," he said, "I watched Karl here take off toward the North, and then I got into my flying sweat-box and headed South. You'll remember, Cap—we had orders not to land, but just scout about for points of interest. I set the two cameras clicking and buzzed along, riding pretty high—about two thousand feet—for a couple of reasons. First, it gave the cameras a greater field, and second, the under-jets travel so far in this half-vacuum they call air here that they stir up dust if you move low."

"We know all that from Putz," grunted Harrison. "I wish you'd saved the films, though. They'd have paid the cost of this junket; remember how the public mobbed the first moon pictures?"

"The films are safe," retorted Jarvis. "Well," he resumed, "as I said, I buzzed along at a pretty good clip; just as we figured, the wings haven't much lift in this air at less than a hundred miles per hour, and even then I had to use the under-jets.

"So, with the speed and the altitude and the blurring caused by the under-jets, the seeing wasn't any too good. I could see enough, though, to distinguish that what I sailed over was just more of this grey plain that we'd been examining the whole week since our landing—same blobby growths and same eternal carpet of crawling little plant-animals, or biopods, as Leroy calls them. So I sailed along, calling back my position every hour as instructed, and not knowing whether you heard me."

"I did!" snapped Harrison.

"A hundred and fifty miles south," continued Jarvis imperturbably, "the surface changed to a sort of low plateau, nothing but desert and orange-tinted sand. I figured that we were right in our guess, then, and this grey plain we dropped on was really the Mare Cimmerium which would make my orange desert the region called Xanthus. If I were right, I ought to hit another grey plain, the Mare Chronium in another couple of hundred miles, and then another orange desert, Thyle I or II. And so I did."

"Putz verified our position a week and a half ago!" grumbled the captain. "Let's get to the point."

"Coming!" remarked Jarvis. "Twenty miles into Thyle—believe it or not—I crossed a canal!"

"Putz photographed a hundred! Let's hear something new!"

"And did he also see a city?"

"Twenty of 'em, if you call those heaps of mud cities!"

"Well," observed Jarvis, "from here on I'll be telling a few things Putz didn't see!" He rubbed his tingling nose, and continued. "I knew that I had sixteen hours of daylight at this season, so eight hours—eight hundred miles—from here, I decided to turn back. I was still over Thyle, whether I or II I'm not sure, not more than twenty-five miles into it. And right there, Putz's pet motor quit!"

"Qvit? How?" Putz was solicitous.

"The atomic blast got weak. I started losing altitude right away, and suddenly there I was with a thump right in the middle of Thyle! Smashed my nose on the window, too!" He rubbed the injured member ruefully.

"Did you maybe try vashing der combustion chamber mit acid sulphuric?" inquired Putz. "Sometimes der lead giffs a secondary radiation—"

"Naw!" said Jarvis disgustedly. "I wouldn't try that, of course—not more than ten times! Besides, the bump flattened the landing gear and busted off the under-jets. Suppose I got the thing working—what then? Ten miles with the blast coming right out of the bottom and I'd have melted the floor from under me!"

He rubbed his nose again. "Lucky for me a pound only weighs seven ounces here, or I'd have been mashed flat!"

"I could have fixed!" ejaculated the engineer. "I bet it vas not serious."

"Probably not," agreed Jarvis sarcastically. "Only it wouldn't fly. Nothing serious, but I had my choice of waiting to be picked up or trying to walk back—eight hundred miles, and perhaps twenty days before we had to leave! Forty miles a day! Well," he concluded, "I chose to walk. Just as much chance of being picked up, and it kept me busy."

"We'd have found you," said Harrison.

"No doubt. Anyway, I rigged up a harness from some seat straps, and put the water tank on my back, took a cartridge belt and revolver, and some iron rations, and started out."

"Water tank!" exclaimed the little biologist, Leroy. "She weigh one-quarter ton!"

"Wasn't full. Weighed about two hundred and fifty pounds earth-weight, which is eighty-five here. Then, besides, my own personal two hundred and ten pounds is only seventy on Mars, so, tank and all, I grossed a hundred and fifty-five, or fifty-five pounds less than my everyday earth-weight. I figured on that when I undertook the forty-mile daily stroll. Oh—of course I took a thermo-skin sleeping bag for these wintry Martian nights.

● "Off I went, bouncing along pretty quickly. Eight hours of daylight meant twenty miles or more. It got tiresome, of course—plugging along over a soft sand desert with nothing to see, not even Leroy's crawling biopods. But an hour or so brought me to the canal—just a dry ditch about four hundred feet wide, and straight as a railroad on its own company map.

"There'd been water in it sometime, though. The ditch was covered with what looked like a nice green lawn. Only, as I approached, the lawn moved out of my way!"

"Eh?" said Leroy.

"Yeah; it was a relative of your biopods. I caught one—a little grass-like blade about as long as my finger, with two thin, stemmy legs."

"He is where?" Leroy was eager.

"He is let go! I had to move, so I plowed along with the walking grass opening in front and closing behind. And then I was out on the orange desert of Thyle again.

"I plugged doggedly along, cussing the sand that made going so tiresome, and, incidentally, cussing that cranky motor of yours, Karl. It was just before twilight that I reached the edge of Thyle, and looked down over the gray Mare Chronium. And I knew there was seventy-five miles of *that* to be walked over, and then a couple of hundred miles of that Xanthus desert, and about as much more Mare Cimmerium. Was I pleased? I started cussing you fellows for not picking me up!"

"We were trying, you sap!" said Harrison.

"That didn't help. Well, I figured I might as well use what was left of daylight in getting down the cliff that bounded Thyle. I found an easy place, and down I went. Mare Chronium was just the same sort of place as this—crazy leafless plants and a bunch of crawlers; I gave it a glance and hauled out my sleeping bag. Up to that time, you know, I hadn't seen anything worth worrying about on this half-dead world—nothing dangerous, that is."

"Did you?" queried Harrison.

"*Did* I! You'll hear about it when I come to it. Well, I was just about to turn in when suddenly I heard the wildest sort of shenanigans!"

"Vot iss shenanigans?" inquired Putz.

"He say, *'Je ne sais quoi',*" explained Leroy. "It is to say, 'I don't know what'."

"That's right," agreed Jarvis. "I didn't know what, so I sneaked over to find out. There was a racket like a flock of crows eating a bunch of canaries—whistles, cackles, caws, trills, and what have you.

I rounded a clump of stumps, and there was Tweel!"

"Tweel?" said Harrison, and "Tveel?" said Leroy and Putz.

"That freak ostrich," explained the narrator. "At least, Tweel is as near as I can pronounce it without sputtering. He called it something like 'Trrrweerrlll'."

"What was he doing?" asked the Captain.

"He was being eaten! And squealing, of course, as any one would."

"Eaten! By what?"

"I found out later. All I could see then was a bunch of black ropy arms tangled around what looked like, as Putz described it to you, an ostrich. I wasn't going to interfere, naturally; if both creatures were dangerous, I'd have one less to worry about.

"But the bird-like thing was putting up a good battle, dealing vicious blows with an eighteen-inch beak, between screeches. And besides, I caught a glimpse or two of what was on the end of those arms!" Jarvis shuddered. "But the clincher was when I noticed a little black bag or case hung about the neck of the bird-thing! It was intelligent! That or tame, I assumed. Anyway, it clinched my decision. I pulled out my automatic and fired into what I could see of its antagonist.

"There was a flurry of tentacles and a spurt of black corruption, and then the thing, with a disgusting sucking noise, pulled itself and its arms into a hole in the ground. The other let out a series of clacks, staggered around on legs about as thick as golf sticks, and turned suddenly to face me. I held my weapon ready, and the two of us stared at each other.

"The Martian wasn't a bird, really. It wasn't even bird-like, except just at first glance. It had a beak all right, and a few feathery appendages, but the beak wasn't really a beak. It was somewhat flexible; I could see the tip bend slowly from side to side; it was almost like a cross between a beak and a trunk. It had four-toed feet, and four fingered things—hands, you'd have to call them, and a little roundish body, and a long neck ending in a tiny head—and that beak. It stood an inch or so taller than I, and—well, Putz saw it!"

The engineer nodded. "Yah! I saw!"

CHAPTER II

Tweel of Mars

Jarvis continued. "So—we stared at each other. Finally the creature went into a series of clackings and twitterings and held out its hands toward me, empty. I took that as a gesture of friendship."

"Perhaps," suggested Harrison, "it looked at that nose of yours and thought you were its brother!"

"Huh! You can be funny without talking! Anyway, I put up my gun and said, 'Aw, don't mention it,' or something of the sort, and the thing came over and we were pals.

"By that time, the sun was pretty low and I knew that I'd better build a fire or get into my thermo-skin. I decided on the fire. I picked a spot at the base of the Thyle cliff, where the rock could reflect a little heat on my back. I started breaking off chunks of this desiccated Martian vegetation, and my companion caught the idea and brought in an armful. I reached for a match, but the Martian fished into his pouch and brought out something that looked like a glowing coal; one touch of it, and the fire was blazing—and you all know what a job we have starting a fire in this atmosphere!

"And that bag of his!" continued the narrator. "That was a manufactured article, my friends; press an end and she popped open—press the middle, and she sealed so perfectly you couldn't see the line. Better than zippers.

"Well, we stared at the fire a while and I decided to attempt some sort of communication with the Martian. I pointed at myself and said 'Dick'; he caught the drift immediately, stretched a bony claw at me and repeated 'Tick.' Then I pointed at him, and he gave that whistle I called Tweel; I can't imitate his accent. Things were going smoothly; to emphasize the names, I repeated 'Dick,' and then, pointing at him, 'Tweel.'

"There we stuck! He gave some clacks that sounded negative, and said something like 'P-p-p-proot.' And that was just the beginning; I was always 'Tick,' but as for him—part of the time he was 'Tweel,' and part of the time he was 'P-p-p-proot,' and part of the time he was sixteen other noises!

"We just couldn't connect! I tried 'rock,' and I tried 'star,' and 'tree,' and 'fire,' and Lord knows what else, and try as I would, I couldn't get a single word! Nothing was the same for two successive minutes, and if that's a language, I'm an alchemist! Finally I gave it up and called him Tweel, and that seemed to do.

"But Tweel hung on to some of my words. He remembered a couple of them, which I suppose is a great achievement if you're used to a language you have to make up as you go along. But I couldn't get the hang of his talk; either I missed some subtle point or we just didn't *think* alike—and I rather believe the latter view.

"I've other reasons for believing that. After a while I gave up the language business, and tried mathematics. I scratched two plus two equals four on the ground, and demonstrated it with pebbles. Again Tweel caught the idea, and informed me that three plus three equals six. Once more we seemed to be getting somewhere.

"So, knowing that Tweel had at least a grammar school education, I drew a circle for the sun, pointing first at it, and then at the last glow of the sun. Then I sketched in Mercury, and Venus, and Mother Earth, and Mars, and finally, pointing to Mars, I swept my hand around in a sort of inclusive gesture to indicate that Mars was our current environment. I was working up to putting over the idea that my home was on the earth.

"Tweel understood my diagram all right. He poked his beak at it, and with a great deal of trilling and clucking, he added Deimos and Phobos to Mars, and then sketched in the earth's moon!

"Do you see what that proves? It proves that Tweel's race uses telescopes—that they're civilized!"

"Does not!" snapped Harrison. "The moon is visible from here as a fifth magnitude star. They could see its revolution with the naked eye."

"The moon, yes!" said Jarvis. "You've missed my point. Mercury isn't visible! And Tweel knew of Mercury because he placed the Moon at the *third* planet, not the second. If he didn't know Mercury, he'd put the earth second, and Mars third, instead of fourth! See?"

"Humph!" said Harrison.

"Anyway," proceeded Jarvis, "I went on with my lesson. Things were going smoothly, and it looked as if I could put the idea over. I pointed at the earth on my diagram, and then at myself, and then, to clinch it, I pointed to myself and then to the earth itself shining bright green almost at the zenith.

"Tweel set up such an excited clacking that I was certain he understood. He jumped up and down, and suddenly he pointed at himself and then at the sky, and then at himself and at the sky again. He pointed at his middle and then at Arcturus, at his head and then at Spica, at his feet and then at half a dozen stars, while I just gaped at him. Then, all of a sudden, he gave a tremendous leap. Man, what a hop! He shot straight up into the starlight, seventy-five feet if an inch! I saw him silhouetted against the sky, saw him turn and come down at me head first, and land smack on his beak like a javelin! There he stuck square in the center of my sun-circle in the sand—a bull's-eye!"

"Nuts!" observed the captain. "Plain nuts!"

"That's what I thought, too! I just stared at him open-mouthed while he pulled his head out of the sand and stood up. Then I figured he'd missed my point, and I went through the whole blamed rigmarole again, and it ended the same way, with Tweel on his nose in the middle of my picture!"

"Maybe it's a religious rite," suggested Harrison.

"Maybe," said Jarvis dubiously. "Well, there we were. We could exchange ideas up to a certain point, and then—blooey! Something in us was different, unrelated; I don't doubt that Tweel thought me just as screwy as I thought him. Our minds simply looked at the world from different viewpoints, and perhaps his viewpoint is as true as ours. But—we couldn't get together, that's all. Yet, in spite of all difficulties, I *liked* Tweel, and I have a queer certainty that he liked me."

● "Nuts!" repeated the captain. "Just daffy!"

"Yeah? Wait and see. A couple of times I've thought that perhaps we—" He paused, and then resumed his narrative. "Anyway, I finally gave it up, and got into my thermo-skin to sleep. The fire hadn't kept me any too warm, but that damn sleeping bag did. Got stuffy five minutes after I closed myself in. I opened it a little and bingo! Some eighty-below-zero air hit my nose, and that's when I got this pleasant little frostbite to add to the bump I acquired during the crash of my rocket.

"I don't know what Tweel made of my sleeping. He sat around, but when I woke up, he was gone. I'd just crawled out of my bag, though, when I heard some twittering, and there he came, sailing down from that three-story Thyle cliff to alight on his beak beside me. I pointed to myself and toward the north, and he pointed at himself and toward the south, but when I loaded up and started away, he came along.

"Man, how he traveled!—a hundred and fifty feet at a jump, sailing through the air stretched out like a spear, and landing on his beak. He seemed surprised at my plodding, but after a few moments he fell in beside me, only every few minutes he'd go into one of his leaps, and stick his nose into the sand a block ahead of me. Then he'd come shooting back at me; it kept me nervous at first to see that beak of his coming at me like a spear, but he always ended in the sand at my side.

"So the two of us plugged along across the Mare Chronium. Same sort of place as this—same crazy plants and same little green biopods growing in the sand, or crawling out of your way. We talked—not that we understood each other, you know, but just for company. I sang songs, and I suspect Tweel did too; at least, some of his trillings and twitterings had a subtle sort of rhythm.

"Then, for variety, Tweel would display his smattering of English words. He'd point to an outcropping and say 'rock,' and point to a pebble and say it again; or he'd touch my arm and say 'Tick,' and then repeat it. He seemed terrifically amused that the same word meant the same thing twice in succession, or that the same word could apply to two different objects. It set me wondering if perhaps his language wasn't like the primitive speech of some earth people—you know, Captain, like the Negritoes, for instance, who haven't any generic words. No word for food or water or man—words for good food and bad food, or rain water and sea water, or strong man and weak man—but no names for general classes. They're too primitive to understand that rain water and sea water are just different aspects of the same thing. But that wasn't the case with Tweel; it was just that we were somehow mysteriously different—our minds were alien to each other. And yet—we *liked* each other!"

"Looney, that's all," remarked Harrison. "That's why you two were so fond of each other."

"Well, I like *you!*" countered Jarvis wickedly. "Anyway," he resumed, "don't get the idea that there was anything screwy about Tweel. In fact, I'm not so sure but that he couldn't teach our highly praised human intelligence a trick or two. Oh, he wasn't an intellectual superman, I guess; but don't overlook the point that he managed to understand a little of my mental workings, and I never even got a glimmering of his."

"Because he didn't have any!" suggested the captain, while Putz and Leroy blinked attentively.

"You can judge of that when I'm through," said Jarvis. "Well, we plugged along across the Mare Chronium all that day, and all the next. Mare Chronium—Sea of Time! Say, I was willing to agree with Schiaparelli's name by the end of that march! Just that grey, endless plain of weird plants, and never a sign of any other life. It was so monotonous that I was even glad to see the desert of Xanthus toward the evening of the second day.

"I was fair worn out, but Tweel seemed as fresh as ever, for all I never saw him drink or eat. I think he could have crossed the Mare Chronium in a couple of hours with those block-long nose dives of his, but he stuck along with me. I offered him some water once or twice; he took the cup from me and sucked the liquid into his beak, and then carefully squirted it all back into the cup and gravely returned it.

"Just as we sighted Xanthus, or the cliffs that bounded it, one of those nasty sand clouds blew along, not as bad as the one we had here, but mean to travel against. I pulled the transparent flap of my thermo-skin bag across my face and managed pretty well, and I noticed that Tweel used some feathery appendages growing like a mustache at the base of his beak to cover his nostrils, and some similar fuzz to shield his eyes."

● "He is desert creature!" ejaculated the little biologist, Leroy.

"Huh? Why?"

"He drink no water—he is adapt' for sand storm—"

"Proves nothing! There's not enough water to waste anywhere on this desiccated pill called Mars. We'd call all of it desert on earth, you know." He paused. "Anyway, after the sand storm blew over, a little wind kept blowing in our faces, not strong enough to stir the sand. But suddenly things came drifting along from the Xanthus cliffs—small, transparent spheres, for all the world like glass tennis balls! But light—they were almost light enough to float even in this thin air—empty, too; at least, I cracked open a couple and nothing came out but a bad smell. I asked Tweel about them, but all he said was 'No, no, no,' which I took to mean that he knew nothing about them. So they went bouncing by like tumbleweeds, or like soap bubbles, and we plugged on toward Xanthus. Tweel pointed at one of the crystal balls once and said 'rock,' but I was too tired to argue with him. Later I discovered what he meant.

"We came to the bottom of the Xanthus cliffs finally, when there wasn't much daylight left. I decided to sleep on the plateau if possible; anything dangerous, I reasoned, would be more likely to prowl through the vegetation of the Mare Chronium than the sand of Xanthus. Not that I'd seen a single sign of menace, except the rope-armed black thing that had trapped Tweel, and apparently that didn't prowl at all, but lured its victims within reach. It couldn't lure me while I slept, especially as Tweel didn't seem to sleep at all, but simply sat patiently around all night. I wondered how the creature had managed to trap Tweel, but there wasn't any way of asking him. I found that out too, later; it's devilish!

"However, we were ambling around the base of the Xanthus barrier looking for an easy spot to climb. At least, I was. Tweel could have leaped it easily, for the cliffs were lower than Thyle—perhaps sixty feet. I found a place and started up, swearing at the water tank strapped to my back—it didn't bother me except when climbing—and suddenly I heard a sound that I thought I recognized!

"You know how deceptive sounds are in this thin air. A shot sounds like the pop of a cork. But this sound was the drone of a rocket, and sure enough, there went our second auxiliary about ten miles to westward, between me and the sunset!"

"Vas me!" said Putz. "I hunt for you."

"Yeah; I knew that, but what good did it do me? I hung on to the cliff and yelled and waved with one hand. Tweel saw it too, and set up a trilling and twit-

tering, leaping to the top of the barrier and then high into the air. And while I watched, the machine droned on into the shadows to the south.

"I scrambled to the top of the cliff. Tweel was still pointing and trilling excitedly, shooting up toward the sky and coming down head-on to stick upside down on his beak in the sand. I pointed toward the south and at myself, and he said, 'Yes—Yes—Yes'; but somehow I gathered that he thought the flying thing was a relative of mine, probably a parent. Perhaps I did his intellect an injustice; I think now that I did.

"I was bitterly disappointed by the failure to attract attention. I pulled out my thermo-skin bag and crawled into it, as the night chill was already apparent. Tweel stuck his beak into the sand and drew up his legs and arms and looked for all the world like one of those leafless shrubs out there. I think he stayed that way all night."

"Protective mimicry!" ejaculated Leroy. "See? He is desert creature!"

CHAPTER III

The Pyramid Being

● "In the morning," resumed Jarvis, "we started off again. We hadn't gone a hundred yards into Xanthus when I saw something queer! This is one thing Putz didn't photograph, I'll wager!

"There was a line of little pyramids—tiny ones, not more than six inches high, stretching across Xanthus as far as I could see! Little buildings made of pygmy bricks, they were, hollow inside and truncated, or at least broken at the top and empty. I pointed at them and said 'What?' to Tweel, but he gave some negative twitters to indicate, I suppose, that he didn't know. So off we went, following the row of pyramids because they ran north, and I was going north.

"Man, we trailed that line for hours! After a while, I noticed another queer thing: they were getting larger. Same number of bricks in each one, but the bricks were larger.

"By noon they were shoulder high. I looked into a couple—all just the same, broken at the top and empty. I examined a brick or two as well; they were silica, and old as creation itself!"

"How you know?" asked Leroy.

"They were weathered—edges rounded. Silica doesn't weather easily even on earth, and in this climate—!"

"How old you think?"

"Fifty thousand—a hundred thousand years. How can I tell? The little ones we saw in the morning were older—perhaps ten times as old. Crumbling. How old would that make *them?* Half a million years? Who knows?" Jarvis paused a moment. "Well," he resumed, "we followed the line. Tweel pointed at them and said 'rock' once or twice, but he'd done that many times before. Besides, he was more or less right about these.

"I tried questioning him. I pointed at a pyramid and asked 'People?' and indicated the two of us. He set up a negative sort of clucking and said, 'No, no, no. No one-one-two. No two-two-four,' meanwhile rubbing his stomach. I just stared at him and he went through the business again. 'No one-one-two. No two-two-four.' I just gaped at him."

"That proves it!" exclaimed Harrison. "Nuts!"

"You think so?" queried Jarvis sardonically. "Well, I figured it out different! 'No one-one-two!' You don't get it, of course, do you?"

"Nope—nor do you!"

"I think I do! Tweel was using the few English words he knew to put over a very complex idea. What, let me ask, does mathematics make you think of?"

"Why—of astronomy. Or—or logic!"

"That's it! 'No one-one-two!' Tweel was telling me that the builders of the pyramids weren't people!—or that they weren't intelligent, that they weren't reasoning creatures! Get it?"

"Huh! I'll be damned!"

"You probably will."

"Why," put in Leroy, "he rub his belly?"

"Why? Because, my dear biologist,

that's where his brains were! Not in his tiny head—in his middle!"

"C'est impossible!"

"Not on Mars, it isn't! This flora and fauna aren't earthly; your biopods prove that!" Jarvis grinned and took up his narrative. "Anyway, we plugged along across Xanthus and in about the middle of the afternoon, something else queer happened. The pyramids ended."

"Ended!"

"Yeah; the queer part was that the last one—and now they were ten-footers—was capped! See? Whatever built it was still inside; we'd trailed 'em from their half-million-year-old origin to the present.

"Tweel and I both noticed it about the same time. I yanked out my automatic (I had a clip of Boland explosive bullets in it) and Tweel, quick as a sleight-of-hand trick, snapped a queer little glass revolver out of his bag. It was much like our weapons, except that the grip was larger to accommodate his four-taloned hand. And we held our weapons ready while we sneaked up along the lines of empty pyramids.

"Tweel saw the movement first. The top tiers of bricks were heaving, shaking, and suddenly slid down the sides with a thin crash. And then—something—something was coming out!

"A long, silver-grey arm appeared, dragging after it an armored body. Armored, I mean, with scales, silver-grey and dull-shining. The arm heaved the body out of the hole; the beast crashed to the sand.

"It was a nondescript creature—body like a big grey cask, arm and a sort of mouth-hole at one end; stiff, pointed tail at the other—and that's all. No other limbs, no eyes, ears, nose —, nothing! The thing dragged itself a few yards, inserted its pointed tail in the sand, pushed itself upright, and just sat.

● "Tweel and I watched it for ten minutes before it moved. Then, with a creaking and rustling like—oh, like crumpling stiff paper—its arm moved to the mouth-hole and out came a brick! The arm placed the brick carefully on the ground, and the thing was still again.

"Another ten minutes—another brick. Just one of Nature's bricklayers. I was about ready to slip away and move on when Tweel pointed at the thing and said 'rock'! I went 'huh?' and he said it again. Then, to the accompaniment of some of his trilling, he said, 'No—no—,' and gave two or three whistling breaths.

"Well, I got his meaning, for a wonder! I said, 'No breath?' and demonstrated the word. Tweel was ecstatic; he said, 'Yes, yes, yes! No, no, no breet!' Then he gave a leap and sailed out to land on his nose about one pace from the monster!

"I was startled, you can imagine! The arm was going up for a brick, and I expected to see Tweel caught and mangled, but—nothing happened! Tweel pounded on the creature, and the arm took the brick and placed it neatly beside the first. Tweel rapped on its body again, and said 'rock,' and I got up nerve enough to take a look myself.

"Tweel was right again. The creature *was* rock, and it didn't breathe!"

"How you know?" snapped Leroy, his black eyes blazing interest.

"Because I'm a chemist. The beast was made of silica! There must have been pure silicon in the sand, and it lived on that. Get it? We, and Tweel, and those plants out there, and even the biopods are *carbon* life; this thing lived by a different set of chemical reactions. It was silicon life!"

"La vie silicieuse!" shouted Leroy. "I have suspect, and now it is proof! I must go see! *Il faut que je—"*

"All right! All right!" said Jarvis. "You can go see. Anyhow, there the thing was, alive and yet not alive, moving every ten minutes, and then only to remove a brick. Those bricks were its waste matter. See, Frenchy? We're carbon, and our waste is carbon dioxide, and this thing is silicon, and *its* waste is silicon dioxide — silica. But silica is a solid, hence the bricks. And it built itself in, and when it was covered, it moved over to a fresh place to start over. No wonder it creaked! A living creature half a million years old!"

"How you know how old?" Leroy was frantic.

"We trailed its pyramids from the beginning, didn't we? If this weren't the original pyramid builder, the series would have ended somewhere before we found him, wouldn't it?—ended and started over with the small ones. That's simple enough, isn't it?

"But he reproduces, or tries to. Before the third brick came out, there was a little rustle and out popped a whole stream of those little crystal balls. They're his spores, or eggs, or seeds—call 'em what you want. They went bouncing by across Xanthus just as they'd bounced by us back in the Mare Chronium. I've a hunch how they work, too—this is for your information, Leroy. I think the crystal shell of silica is no more than a protective covering, like an eggshell, and that the active principle is the smell inside. It's some sort of gas that attacks silicon, and if the shell is broken near a supply of that element, some reaction starts that ultimately develops into a beast like that one."

"You should try!" exclaimed the little Frenchman. "We must break one to see!"

"Yeah? Well, I did. I smashed a couple against the sand. Would you like to come back in about ten thousand years to see if I planted some pyramid monsters? You'd most likely be able to tell by that time!" Jarvis paused and drew a deep breath. "Lord! That queer creature! Do you picture it? Blind, deaf, nerveless, brainless —just a mechanism, and yet—immortal! Bound to go on making bricks, building pyramids, as long as silicon and oxygen exist, and even afterwards it'll just stop. It won't be dead. If the accidents of a million years bring it its food again, there it'll be, ready to run again, while brains and civilizations are part of the past. A queer beast—yet I met a stranger one!"

"If you did, it must have been in your dreams!" growled Harrison.

"You're right!" said Jarvis soberly. "In a way, you're right. The dream-beast! That's the best name for it—and it's the most fiendish, terrifying creation one could imagine! More dangerous than a lion, more insidious than a snake!"

"Tell me!" begged Leroy. "I must go see!"

"Not *this* devil!" He paused again. "Well," he resumed, "Tweel and I left the pyramid creature and plowed along through Xanthus. I was tired and a little disheartened by Putz's failure to pick me up, and Tweel's trilling got on my nerves, as did his flying nosedives. So I just strode along without a word, hour after hour across that monotonous desert.

"Toward mid-afternoon we came in sight of a low dark line on the horizon. I knew what it was. It was a canal; I'd crossed it in the rocket and it meant that we were just one-third of the way across Xanthus. Pleasant thought, wasn't it? And still, I was keeping up to schedule.

"We approached the canal slowly; I remembered that this one was bordered by a wide fringe of vegetation and that Mud-heap City was on it."

CHAPTER IV

The Dream-Beast

● "I was tired, as I said. I kept thinking of a good hot meal, and then from that I jumped to reflections of how nice and home-like even Borneo would seem after this crazy planet, and from that, to thoughts of little old New York, and then to thinking about a girl I know there—Fancy Long. Know her?"

" 'Vision entertainer,' " said Harrison. "I've tuned her in. Nice blonde—dances and sings on the *Yerba Mate* hour."

"That's her," said Jarvis ungrammatically. "I know her pretty well — just friends, get me?—though she came down to see us off in the *Ares*. Well, I was thinking about her, feeling pretty lonesome, and all the time we were approaching that line of rubbery plants.

"And then—I said, 'What 'n hell!' and stared. And there she was—Fancy Long, standing plain as day under one of those crack-brained trees, and smiling and waving just the way I remembered her when we left!"

"Now you're nuts, too!" observed the captain.

"Boy, I almost agreed with you! I stared and pinched myself and closed my eyes and then stared again—and every time, there was Fancy Long smiling and waving! Tweel saw something, too; he was trilling and clucking away, but I scarcely heard him. I was bounding toward her over the sand, too amazed even to ask myself questions.

"I wasn't twenty feet from her when Tweel caught me with one of his flying leaps. He grabbed my arm, yelling, 'No—no—no!' in his squeaky voice. I tried to shake him off—he was as light as if he were built of bamboo—but he dug his claws in and yelled. And finally some sort of sanity returned to me and I stopped less than ten feet from her. There she stood, looking as solid as Putz's head!"

"Vot?" said the engineer.

"She smiled and waved, and waved and smiled, and I stood there dumb as Leroy, while Tweel squeaked and chattered. I *knew* it couldn't be real, yet—there she was!

"Finally I said, 'Fancy! Fancy Long!' She just kept on smiling and waving, but looking as real as if I hadn't left her thirty-seven million miles away.

"Tweel had his glass pistol out, pointing it at her. I grabbed his arm, but he tried to push me away. He pointed at her and said, 'No breet! No breet!,' and I understood that he meant that the Fancy Long thing wasn't alive. Man, my head was whirling!

"Still, it gave me the jitters to see him pointing his weapon at her. I don't know why I stood there watching him take careful aim, but I did. Then he squeezed the handle of his weapon; there was a little puff of steam, and Fancy Long was gone! And in her place was one of those writhing, black, rope-armed horrors like the one I'd saved Tweel from!

"The dream-beast! I stood there dizzy, watching it die while Tweel trilled and whistled. Finally he touched my arm, pointed at the twisting thing, and said, 'You one-one-two, he one-one-two.' After he'd repeated it eight or ten times, I got it. Do any of you?"

"*Oui!*" shrilled Leroy. "*Moi—je le comprends!* He mean you think of something, the beast he know, and you see it! *Un chien*—a hungry dog, he would see the big bone with meat! Or smell it—not?"

"Right!" said Jarvis. "The dream-beast uses its victim's longings and desires to trap its prey. The bird at nesting season would see its mate, the fox, prowling for its own prey, would see a helpless rabbit!"

"How he do?" queried Leroy.

"How do I know? How does a snake back on earth charm a bird into its very jaws? And aren't there deep-sea fish that lure their victims into their mouths? Lord!" Jarvis shuddered. "Do you see how insidious the monster is? We're warned now— but henceforth we can't trust even our eyes. You might see me—I might see one of you—and back of it may be nothing but another of those black horrors!"

"How'd your friend know?" asked the captain abruptly.

"Tweel? I wonder! Perhaps he was thinking of something that couldn't possibly have interested me, and when I started to run, he realized that I saw something different and was warned. Or perhaps the dream-beast can only project a single vision, and Tweel saw what I saw—or nothing. I couldn't ask him. But it's just another proof that his intelligence is equal to ours or greater."

"He's daffy, I tell you!" said Harrison. "What makes you think his intellect ranks with the human?"

"Plenty of things! First, the pyramid-beast. He hadn't seen one before; he said as much. Yet he recognized it as a dead-alive automaton of silicon."

"He could have heard of it," objected Harrison. "He lives around here, you know."

● "Well, how about the language? I couldn't pick up a single idea of his and he learned six or seven words of mine. And do you realize what complex ideas he

put over with no more than those six or seven words? The pyramid-monster—the dream-beast! In a single phrase he told me that one was a harmless automaton and the other a deadly hypnotist. What about that?"

"Huh!" said the captain.

"*Huh* if you wish! Could you have done it knowing only six words of English? Could you go even further, as Tweel did, and tell me that another creature was of a sort of intelligence so different from ours that understanding was impossible—even more impossible than that between Tweel and me?"

"Eh? What was that?"

"Later. The point I'm making is that Tweel and his race are worthy of our friendship. Somewhere on Mars — and you'll find I'm right—is a civilization and culture equal to ours, and maybe more than equal. And communication is possible between them and us; Tweel proves that. It may take years of patient trial, for their minds are alien, but less alien than the next minds we encountered—if they *are* minds."

"The next ones? What next ones?"

"The people of the mud cities along the canals." Jarvis frowned, then resumed his narrative. "I thought the dream-beast and the silicon-monster were the strangest beings conceivable, but I was wrong. These creatures are still more alien, less understandable than either and far less comprehensible than Tweel, with whom friendship is possible, and even, by patience and concentration, the exchange of ideas.

"Well," he continued, "we left the dream-beast dying, dragging itself back into its hole, and we moved toward the canal. There was a carpet of that queer walking-grass scampering out of our way, and when we reached the bank, there was a yellow trickle of water flowing. The mound city I'd noticed from the rocket was a mile or so to the right and I was curious enough to want to take a look at it.

"It had seemed deserted from my previous glimpse of it, and if any creatures were lurking in it—well, Tweel and I were both armed. And by the way, that crystal weapon of Tweel's was an interesting device; I took a look at it after the dream-beast episode. It fired a little glass splinter, poisoned, I suppose, and I guess it held at least a hundred of 'em to a load. The propellent was steam — just plain steam!"

"Shteam!" echoed Putz. "From vot come shteam?"

"From water, of course! You could see the water through the transparent handle, and about a gill of another liquid, thick and yellowish. When Tweel squeezed the handle—there was no trigger—a drop of water and a drop of the yellow stuff squirted into the firing chamber, and the water vaporized—pop!—like that. It's not so difficult; I think we could develop the same principle. Concentrated sulphuric acid will heat water almost to boiling, and so will quicklime, and there's potassium and sodium—

"Of course, his weapon hadn't the range of mine, but it wasn't so bad in this thin air, and it *did* hold as many shots as a cowboy's gun in a Western movie. It was effective, too, at least against Martian life; I tried it out, aiming at one of the crazy plants, and darned if the plant didn't wither up and fall apart! That's why I think the glass splinters were poisoned.

"Anyway, we trudged along toward the mud-heap city and I began to wonder whether the city builders dug the canals. I pointed to the city and then at the canal, and Tweed said 'No—no—no!" and gestured toward the south. I took it to mean that some other race had created the canal system, perhaps Tweel's people. I don't know; maybe there's still another intelligent race on the planet, or a dozen others. Mars is a queer little world."

CHAPTER V

The Barrel-People

● "A hundred yards from the city we crossed a sort of road—just a hard-packed mud trail, and then, all of a sudden, along came one of the mound builders!

"Man, talk about fantastic beings! It looked rather like a barrel trotting along on four legs with four other arms or tentacles. It had no head, just body and members and a row of eyes completely around it. The top end of the barrel-body was a diaphragm stretched as tight as a drum head, and that was all. It was pushing a little coppery cart and tore right past us like the proverbial bat out of Hell. It didn't even notice us, although I thought the eyes on my side shifted a little as it passed.

"A moment later another came along, pushing another empty cart. Same thing —it just scooted past us. Well, I wasn't going to be ignored by a bunch of barrels playing train, so when the third one approached, I planted myself in the way—ready to jump, of course, if the thing didn't stop.

"But it did. It stopped and set up a sort of drumming from the diaphragm on top. And I held out both hands and said mildly, 'We are friends!' And what do you suppose the thing did?"

"Said, 'Pleased to meet you,' I'll bet!" suggested Harrison.

"I couldn't have been more surprised if it had! It drummed on its diaphragm, and then suddenly boomed out, 'We are v-r-r-riends!' and gave its pushcart a vicious poke at me! I jumped aside, and away it went while I stared dumbly after it.

"A minute later another one came hurrying along. This one didn't pause, but simply drummed out, 'We are v-r-r-riends!' and scurried by. How did it learn the phrase? Were all of the creatures in some sort of communication with each other? Were they all parts of some central organism? I don't know, though I think Tweel does.

"Anyway, the creatures went sailing past us, every one greeting us with the same statement. It got to be funny; I never thought to find so many friends on this God-forsaken ball! Finally I made a puzzled gesture to Tweel; I guess he understood, for he said, 'One-one-two—yes!—two-two-four—no!' Get it?"

"Sure," said Harrison. "It's a Martian nursery rhyme."

"Yeah! Well, I was getting used to Tweel's symbolism, and I figured it out this way. 'One-one-two—yes!' The creatures were intelligent. 'Two-two-four—no!' Their intelligence was not of our order, but something different and beyond the logic of two and two is four. Maybe I missed his meaning. Perhaps he meant that their minds were of low degree, able to figure out the simple things—'One-one-two—yes!'—but not more difficult things —'Two-two-four—no!' But I think from what we saw later that he meant the other.

"After a few moments, the creatures came rushing back—first one, then another. Their pushcarts were full of stones, sand, chunks of rubbery plants, and such rubbish as that. They droned out their friendly greeting, which didn't really sound so friendly, and dashed on. The third one I assumed to be my first acquaintance and I decided to have another chat with him. I stepped into his path again and waited.

"Up he came, booming out his 'We are v-r-r-riends' and stopped. I looked at him; four or five of his eyes looked at me. He tried his password again and gave a shove on his cart, but I stood firm. And then the—the dashed creature reached out one of his arms, and two finger-like nippers tweaked my nose!"

"Haw!" roared Harrison. "Maybe the things have a sense of beauty!"

"Laugh!" grumbled Jarvis. "I'd already had a nasty bump and a mean frostbite on that nose. Anyway, I yelled 'Ouch!' and jumped aside and the creature dashed away; but from then on, their greeting was 'We are v-r-r-riends! Ouch!' Queer beasts!

"Tweel and I followed the road squarely up to the nearest mound. The creatures were coming and going, paying us not the slightest attention, fetching their loads of rubbish. The road simply dived into an opening, and slanted down like an old mine, and in and out darted the barrel-people, greeting us with their eternal phrase.

"I looked in; there was a light somewhere below, and I was curious to see it. It didn't look like a flame or torch, you understand, but more like a civilized light, and I thought that I might get some clue as to the creatures' development. So in I went and Tweel tagged along, not without a few trills and twitters, however.

"The light was curious; it sputtered and flared like an old arc light, but came from a single black rod set in the wall of the corridor. It was electric, beyond doubt. The creatures were fairly civilized, apparently.

"Then I saw another light shining on something that glittered and I went on to look at that, but it was only a heap of shiny sand. I turned toward the entrance to leave, and the Devil take me if it wasn't gone!

"I suppose the corridor had curved, or I'd stepped into a side passage. Anyway, I walked back in the direction I thought we'd come, and all I saw was more dim-lit corridor. The place was a labyrinth! There was nothing but twisting passages running every way, lit by occasional lights, and now and then a creature running by, sometimes with a pushcart, sometimes without.

"Well, I wasn't much worried at first. Tweel and I had only come a few steps from the entrance. But every move we made after that seemed to get us in deeper. Finally I tried following one of the creatures with an empty cart, thinking that he'd be going out for his rubbish, but he ran around aimlessly, into one passage and out another. When he started dashing around a pillar like one of these Japanese waltzing mice, I gave up, dumped my water tank on the floor, and sat down.

"Tweel was as lost as I. I pointed up and he said 'No—no—no!' in a sort of helpless trill. And we couldn't get any help from the natives; they paid us no attention at all, except to assure us they were friends—ouch!

● "Lord! I don't know how many hours or days we wandered around there! I slept twice from sheer exhaustion; Tweel never seemed to need sleep. We tried following only the upward corridors, but they'd run uphill a ways and then curve downwards. The temperature in that damned ant hill was constant; you couldn't tell night from day and after my first sleep I didn't know whether I'd slept one hour or thirteen, so I couldn't tell from my watch whether it was midnight or noon.

"We saw plenty of strange things. There were machines running in some of the corridors, but they didn't seem to be doing anything—just wheels turning. And several times I saw two barrel-beasts with a little one growing between them, joined to both."

"Parthenogenesis!" exulted Leroy. "Parthenogenesis by budding—like *les tulipes!*"

"If you say so, Frenchy," agreed Jarvis. "The things never noticed us at all, except, as I say, to greet us with 'We are v-r-r-riends! Ouch!' They seemed to have no home-life of any sort, but just scurried around with their pushcarts, bringing in rubbish. And finally I discovered what they did with it.

"We'd had a little luck with a corridor, one that slanted upwards for a great distance. I was feeling that we ought to be close to the surface when suddenly the passage debouched into a domed chamber, the only one we'd seen. And man!—I felt like dancing when I saw what looked like daylight through a crevice in the roof.

"There was a—a sort of machine in the chamber, just an enormous wheel that turned slowly, and one of the creatures was in the act of dumping his rubbish below it. The wheel ground it with a crunch—sand, stones, plants, all into powder that sifted away somewhere. While we watched, others filed in, repeating the process, and that seemed to be all. No rhyme nor reason to the whole thing—but that's characteristic of this crazy planet. And there was another fact that's almost too bizarre to believe.

"One of the creatures, having dumped his load, pushed his cart aside with a crash and calmly shoved himself under the

wheel! I watched him crushed, too stupefied to make a sound, and a moment later, another followed him! They were perfectly methodical about it, too; one of the cartless creatures took the abandoned pushcart.

"Tweel didn't seem surprised; I pointed out the next suicide to him, and he just gave the most human-like shrug imaginable, as much as to say, 'What can I do about it?' He must have known more or less about these creatures.

"Then I saw something else. There was something beyond the wheel, something shining on a sort of low pedestal. I walked over; there was a little crystal about the size of an egg, fluorescing to beat Tophet. The light from it stung my hands and face, almost like a static discharge, and then I noticed another funny thing. Remember that wart I had on my left thumb? Look!" Jarvis extended his hand. "It dried up and fell off—just like that! And my abused nose—say, the pain went out of it like magic! The thing had the property of hard X-rays or gamma radiations, only more so; it destroyed diseased tissue and left healthy tissue unharmed!

"I was thinking what a present *that'd* be to take back to Mother Earth when a lot of racket interrupted. We dashed back to the other side of the wheel in time to see one of the pushcarts ground up. Some suicide had been careless, it seems.

"Then suddenly the creatures were booming and drumming all around us and their noise was decidedly menacing. A crowd of them advanced toward us; we backed out of what I thought was the passage we'd entered by, and they came rumbling after us, some pushing carts and some not. Crazy brutes! There was a whole chorus of 'We are v-r-r-riends! Ouch!' I didn't like the 'ouch'; it was rather suggestive.

"Tweel had his glass gun out and I dumped my water tank for greater freedom and got mine. We backed up the corridor with the barrel-beasts following—about twenty of them. Queer thing—the ones coming in with loaded carts moved past us inches away without a sign.

"Tweel must have noticed that. Suddenly, he snatched out that glowing coal cigar-lighter of his and touched a cart-load of plant limbs. Puff! The whole load was burning—and the crazy beast pushing it went right along without a change of pace! It created some disturbance among our 'V-r-r-riends,' however—and then I noticed the smoke eddying and swirling past us, and sure enough, there was the entrance!

"I grabbed Tweel and out we dashed and after us our twenty pursuers. The daylight felt like Heaven, though I saw at first glance that the sun was all but set, and that was bad, since I couldn't live outside my thermo-skin bag in a Martian night—at least, without a fire.

"And things got worse in a hurry. They cornered us in an angle between two mounds, and there we stood. I hadn't fired nor had Tweel; there wasn't any use in irritating the brutes. They stopped a little distance away and began their booming about friendship and ouches.

"Then things got still worse! A barrel-brute came out with a pushcart and they all grabbed into it and came out with handfuls of foot-long copper darts—sharp-looking ones—and all of a sudden one sailed past my ear—zing! And it was shoot or die then.

"We were doing pretty well for a while. We picked off the ones next to the pushcart and managed to keep the darts at a minimum, but suddenly there was a thunderous booming of 'v-r-r-riends' and 'ouches,' and a whole army of 'em came out of their hole.

"Man! We were through and I knew it! Then I realized that Tweel wasn't. He could have leaped the mound behind us as easily as not. He was staying for me!

"Say, I could have cried if there'd been time! I'd liked Tweel from the first, but whether I'd have had gratitude to do what he was doing—suppose I *had* saved him from the first dream-beast—he'd done as much for me, hadn't he? I grabbed his arm, and said 'Tweel,' and pointed up, and he understood. He said, 'No—no—no,

Tick!' and popped away with his glass pistol.

"What could I do? I'd be a goner anyway when the sun set, but I couldn't explain that to him. I said, 'Thanks, Tweel. You're a man!' and felt that I wasn't paying him any compliment at all. A man! There are mighty few men who'd do that.

"So I went 'bang' with my gun and Tweel went 'puff' with his, and the barrels were throwing darts and getting ready to rush us, and booming about being friends. I had given up hope. Then suddenly an angel dropped right down from Heaven in the shape of Putz, with his under-jets blasting the barrels into very small pieces!

"Wow! I let out a yell and dashed for the rocket; Putz opened the door and in I went, laughing and crying and shouting! It was a moment or so before I remembered Tweel; I looked around in time to see him rising in one of his nosedives over the mound and away.

"I had a devil of a job arguing Putz into following! By the time we got the rocket aloft, darkness was down; you know how it comes here—like turning off a light. We sailed out over the desert and put down once or twice. I yelled 'Tweel!' and yelled it a hundred times, I guess. We couldn't find him; he could travel like the wind and all I got—or else I imagined it—was a faint trilling twittering drifting out of the south. He'd gone, and damn it! I wish—I wish he hadn't!"

The four men of the *Ares* were silent—even the sardonic Harrison. At last little Leroy broke the stillness.

"I should like to see," he murmured.

"Yeah," said Harrison. "And the wart-cure. Too bad you missed that; it might be the cancer cure they've been hunting for a century and a half."

"Oh, that!" muttered Jarvis gloomily. "That's what started the fight!" He drew a glistening object from his pocket.

"Here it is."

THE END

TESTS POSSIBILITY OF ROCKET SHIPS

Cleveland Engineer Believes in Such Air Propulsion

A belief that rocket-driven passenger planes may some day streak through the stratosphere five hundred miles an hour is spurring a young Cleveland engineer to test methods of harnessing rocket power.

Ernest Loebell would send planes through stratospheric airways twenty miles high—nearly double the altitude man has attained so far—and contends utilization of rockets and stratosphere would enable air travelers to breakfast in New York and lunch in Paris.

A graduate of the universities of Breslau and Oldenburg, Loebell is at work here on a rocket motor of experimental size and before long he intends to touch off a larger one—a twelve-foot rocket—which he hopes will zoom up twenty miles. An automatic parachute would open when the rocket began to fall, in the interests of preserving the mechanism and perhaps Ohio's landscape.

Attached to the projectile would be an altitude-recorder, automatic radio transmitter and a camera to take pictures of the earth.

The "kick-off," according to Loebell's design, would come from a combustion chamber into which gasoline or propane and oxygen would be fed under pressure. Exhaust from the burning chamber would shoot through a down-pointed nozzle, booting the big shell upward.

Of course, the idea of shooting passengers from New York to Paris would have its complications, Loebell concedes. They probably would have to sit in airtight compartments and wear oxygen masks, but he has in mind passengers more concerned with speed than comfort.

The envisioned rocket transport, perhaps to the disappointment of spectators at the airport, wouldn't take off like Fourth of July at the county fair. Regular motors would be used until it pierced the "thick air" layers.

Then, according to Loebell's idea, the wings would be folded in somehow and wham!—the fireworks would start. When the ship neared its destination, the rockets would cease firing, the wings would pop out again, the motors would roar and the ship that left New York this morning would land in Paris this afternoon.

A HAIR-RAISING TALE

By W. L. SHEPPARD, Jr.

● Scientists had warned men about it for years and now at last it had occurred. The human race was bald. Soft life and indolence had, through the ages, slowly but surely eliminated the hair which had been protection for our ape ancestors and now was but an ornament. Falling hair and baldness were common things for middle-aged people of the twentieth century, but now it had reached the point where children never grew any and mankind went from birth to death wearing wigs which modesty forbade them to lay aside. Everyone but Dr. John Dashe, the great scientist, had by now accepted baldness as a matter of course, but he had for twenty years hopefully worked on the problem, trusting in the end to be able to restore to mankind the luxuriant growth which had originally covered his rather ugly naked cranium.

The Hair-Restorer

● "Did you want to see me, Jack?"

Dr. Dashe looked up from the dog-pen over which he was bending, and saw, framed in the doorway, the figure of a young man of perhaps thirty, pleasant of countenance, spare yet muscular of frame, and with the alert look common to the newspaper reporter.

"Come in, Joe," said the doctor, "and have a look at this. Did you ever see a dog like it before?"

Joseph Dotte bent over the pen.

"Most unusual-looking animal! Why, he has no hair on his head but his body is covered with it! Where did he come from?"

"Last week this dog was a Mexican hairless," said the doctor. "My experiments have at last been rewarded with success and here is my proof. As I raised hair on this dog, so can I raise hair on you or any other man."

"Wonderful! Wonderful! But if it's all the same to you, doctor, I should rather have the hair on my head," said Joe, seating himself and lighting his pipe. "How do you do it?"

The doctor dropped into the only remaining chair in the laboratory. Although they had been to school together, he looked fully fifteen years older than his friend, and night work and little sleep had left their mark upon him. He would have been six feet in height but for his stoop, and his face was lined and furrowed, the results of worry and squinting to see his work through bleary and watery eyes. He refused to wear glasses since he claimed they got in his way, and if he had worn them, he would undoubtedly have mislaid them by the end of the first day. He was bony and emaciated, due more to lack of food than anything else. He would shut himself up in his laboratory and entirely forget his meals to the despair of his housekeeper, who was too much in awe of his violent temper to disturb him at his work. But now the doctor's face bore a quiet and happy smile, and his body and mind appeared at last to be relaxed.

"Do you remember," he said, "hearing of the experiments of Dr. Coolidge in the twentieth century with the cathode ray? He grew hair on a rabbit's ear by exposing it to the cathode rays for a fifth of a second. I have changed his device and perfected it, after years of effort, to make it applicable to raising hair on bald heads. The hair Dr. Coolidge raised on the rabbit was of course white, but I have found that by the introduction of certain organic pigments into the skin, the hair that results can be colored as desired. By the ju-

dicious use of indigo in the skin of a guinea pig, I grew blue hair on its body. Experimentation has shown me the proper pigments to use to raise blond, red, or brown hair of any shade desired. Black hair may be obtained by the proper application of aniline black, or several others of the coal tar dyes. The experimental work is now complete, and I am ready to raise hair on anyone's head."

"But what is to prevent the ray from starting growths of hair indiscriminately all over the patient's head instead of only the normal places?"

The doctor smiled and handed his friend a peculiar lead mask, which he picked up from a near-by table.

"The rays will not penetrate lead of this thickness," he said. "All that is necessary is for me to screen the patient's face and ears with this mask to prevent the rays from reaching them. Similar screens would be applied to his neck and throat, thereby limiting the growth of hair to any part of the head desired."

The First Treatment

● A few days later, a tall, distinguished-looking man knocked at Dr. Dashe's door. Dr. Dashe recognized him as Mr. James Eckes, the multi-millionaire president of Television, Inc.

"I have heard, Doctor," he said, "that you have perfected a process for growing hair, and I have come to ask you to let me be the first to take the treatment."

It turned out that Mr. Eckes was enamored of a beautiful actress, but that he had a rival with a very thin growth of real hair, and that due to this, the latter had supplanted him in her affections.

An agreement was soon reached, and Mr. Eckes submitted to a scalp treatment with a brown dye which was to lend its color to the hair to be grown upon his head.

"Your head will be sore for a few days," said the doctor, as he adjusted the mask. "First a scab will form over the surface which has been exposed to the ray. Then, in about two days, this will peel off and you will find hair beginning to grow in its place. It will grow quickly until it is about an inch long and then slow up to a normal and steady growth."

After a four-fifths-of-a-second exposure, Mr. Eckes replaced his wig upon a sore and sensitive scalp and, thanking the doctor, went home.

At the end of a week, his synthetic hair had attained a length of two inches and he was engaged to the girl of his dreams.

Success

● The success of Dr. Dashe's invention was now assured. In one month, every hospital of any size in the world had been fitted with his ray tubes, and all the world was rushing to take the treatment. The occupation of barber, dead for a century and a half, was revived, and many unemployed were studying in hastily organized institutions to take up this profession. In seven months, wigs had been totally discarded and only imbeciles and half-wits had heads unadorned by the new fuzzy growth.

The people of the world had taken advantage of science's new discoveries in dyes to experiment with their new-found hair. Lavender, orange, green, and blue hair might be seen daily on the street, and each new dye to be discovered which gave a new or distinctive shade was quickly accepted and employed. The whole world was happy in its synthetic hair. The women were especially rapturous about it. Life for them had at last found its meaning. The only drawback to the age of mechanical perfection had been removed.

Dr. Dashe and his associates and friends who had put up the money to commercialize his invention had become millionaires and were in very truth living on the fat of the land.

Disaster

● Business ran on at the normal level for a few months until May 25th, when the stock market made a sudden and unaccountable drop, and on the following day jumped double the amount of the fall to reach a new and staggering height.

But this was only the beginning. For three weeks it continued to fluctuate, moving from extreme lows to extreme highs in less than five hours.

Then, on the 19th of June, Mr. Eckes, the president of Hair, Inc., died suddenly. He had been the first to take the treatment and was the chief stockholder in Dr. Dashe's company. His death was reported to be from concussion of the brain, but no external injury to his head was apparent. An autopsy was ordered. Dr. Dashe, who had recently taken the treatment himself, attended with his head swathed in bandages to protect his sore scalp from the hot summer sun.

It took but a minute to find the cause of the millionaire's death. He had a growth of hair nearly six inches long covering the entire surface of his brain. It had grown and filled his head until the pressure on his brain had killed him!

Other financiers were fast becoming invalids as a result of the awful pressures on their brains. Influenced by these sick men, business was performing the wildest antics. Men were going crazy. Crime was increasing to enormous proportions. Even new-born children were exhibiting the same symptoms. The ailment was hereditary!

The human race had become completely hair-brained. It was in its death throes.

All business was now at a standstill. Suicides increased. Murder became a daily occurrence. Crazed men and women set fire to buildings, smashed automobiles, railroads, airplanes, tore at one another with knives and with their bare hands. The streets became a shambles, full of horribly mutilated corpses upon which gibbering maniacs danced, shrieking and screaming and waving aloft bloody pieces of dismembered bodies. The end of the world had come. Mankind could not live another month.

* * *

"Ouch." Dr. Dashe sat on the floor rubbing his head. The bedclothes were in a knot about his legs. He glanced at the clock. Just seven. No use trying to go to sleep again. Ruefully rubbing the back of his head, he went to start his bath, stopping on the way, however, to tear up the formula of a hair-restorer on which he had been working.

THE END

WONDER STORIES *presents*

The cream of contemporary Science-Fiction. A few of the forthcoming tales are:

●

THE MAN FROM BEYOND by John Beynon Harris is an interplanetary story with a new, refreshing plot. What would you do, were you faced with the situation that confronted Gratz? Never before had a man been struck with such a terrible revelation — never had anyone been forced to learn a secret of such monstrous proportions. You will sympathise with Gratz and pity him, and thank your lucky stars that you were not in his place.

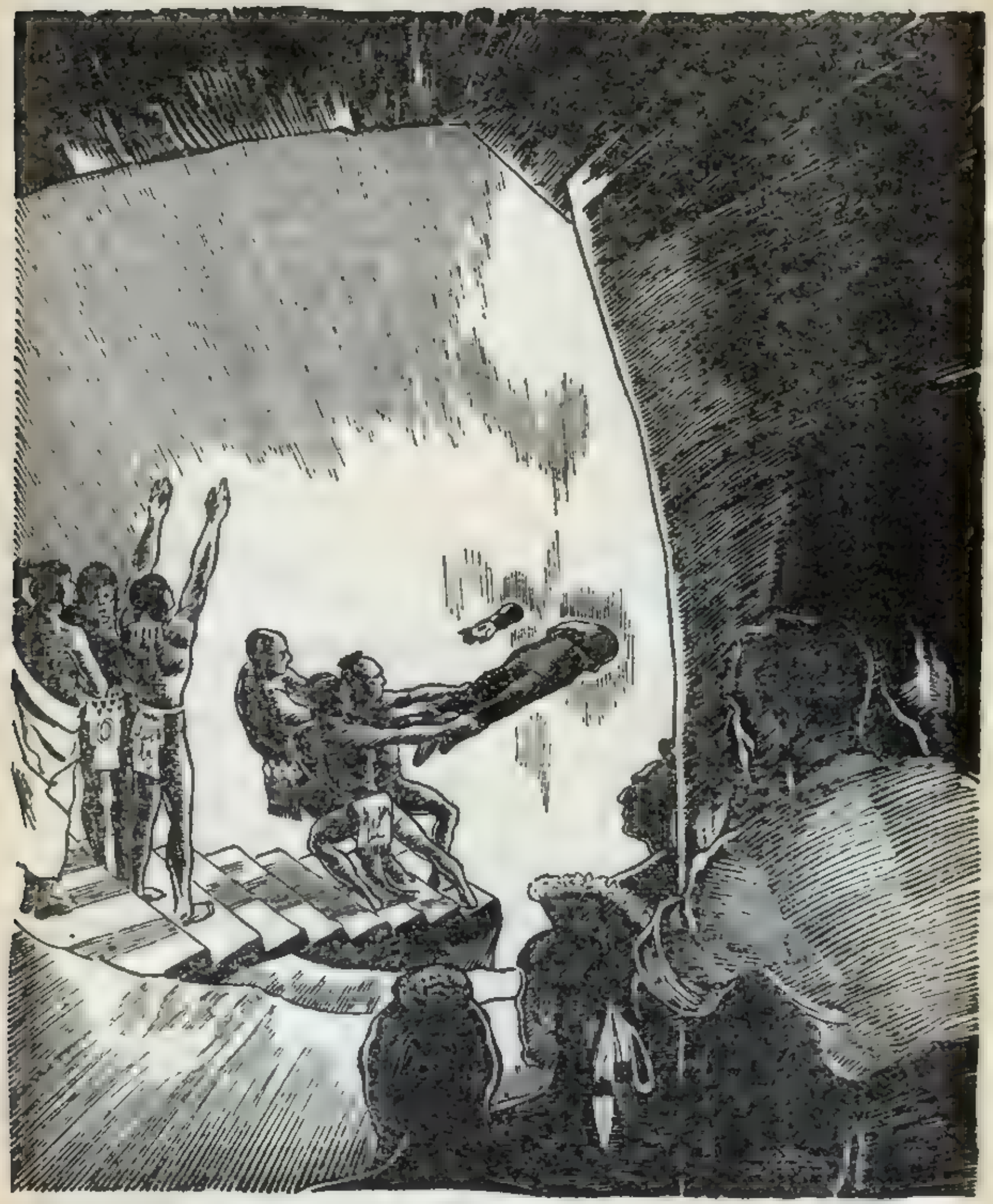
THE MEN FROM GAYLN by E. Mantell shows us a terror that descends upon mankind — not a terror from another world or dimension—but one from men who were *not yet born*. Breathless action and terrific destruction make this tale a real thriller.

THE FALL OF THE EIFFEL TOWER by Charles de Richter is another response to the cries of our readers for foreign science-fiction. We have imported this great French novel and have had it translated continuing our policy of presenting our readers with the best science-fiction written in foreign languages, besides the cream of American and English material. This story will run serially in three parts, beginning in our September issue. You cannot afford to miss it.

THE TREE OF EVIL by David H. Keller, M.D. Here again we present one of the masterpieces of the favorite of favorites. Never has one of the good doctor's stories received anything but the highest praise. Taine of San Francisco, [illegible] most famous detective in science-fiction, re-appears in this tale, to unravel another scientific mystery.

Watch for these stories in the next few issues, among others by the leading authors in the field

WONDER STORIES—*ON ALL NEWSSTANDS*



(Illustration by Winter)

They grasped his inert legs and pulled him slowly from the curtain.

THE LAST SHRINE

By CHESTER D. CUTHBERT

● While the present story will probably be labeled too fantastic by some, we are presenting it to our readers as a novelty. You probably remember the famous "Moon Pool" with its weird science. The present tale runs parallel to that famous story in that it uses a science all of its own.

And lest you immediately jump to denounce the peculiar science presented in "The Last Shrine" you might remember the following:

In the hypnotic state, human beings do things which are extremely weird and most of them are not fully understood by science even today. The same is the case of a medium in a trance; and while we personally do not believe in spiritualism, mediums certainly at times do produce odd effects.

And the Indian fakirs, while in a cataleptic state, have accomplished a number of phenomena for which science has no explanation today. And lastly, if you doubt that there are such things as conflicting time elements, ask anyone who has ever been under the effect of ether or chloroform during an operation. The time sense has been entirely lost, and when the patient awakes, it is as if he went to sleep but a moment before, although he may have been under the influence of a narcotic for many hours.

In any event, the editors enjoyed the story, and we hope the readers will find some food for thought in it.

● High in the Sierra Madre Mountains lies a cup-shaped valley which, together with its inhabitants, forms the basis of innumerable legends current among the people of the surrounding country. The valley itself is scarcely remarkable except for its inaccessibility; for it is of but moderate size, has never produced a commodity of value to the outer world, and has neither attracted nor repelled visitors.

To survive the test of time, any legend must have some modicum of truth as a foundation on which may be erected such fantasms of thought as may best serve their creator. Consequently, when definite data are unavailable, careful attention must be paid each such legend, that one may gain some impression of its subject.

It is said, for instance, that the people of the "Valley of Peace" are an eternal race. In the lands outlying the barren wastes that immediately border the valley are many Indian tribes claiming descent from the valley people, who emigrated, in bygone days, to colonize many lands. Inconceivably far back beyond the years covered by this legendry extends the life of the dwellers of the valley.

According to another legend, firmly rooted in the folklore of the region, no whisper of violence has ever threatened the peace enjoyed by this ancient race.

Yet the eternally peaceful impression created by these legends is vaguely shadowed by stories of the disappearance, from time to time, of prospectors and other lone wanderers last seen in the vicinity of the valley. Unexplained, these tales give rise to rumors of sacrificial orgies wherein the lives of such wanderers are given to forgotten gods. Apparently, none of the missing have possessed affiliations with any in the outside world and the disappearances are spread over two or three centuries of time, so that the rumors are not sufficiently convincing to warrant investigating expeditions.

Whispers of the "Valley of Peace" were quietly insinuated into my conversations with various people soon after my arrival in the little coast village. Tired of the futility expressed by the continual warfare of Chinese war lords, I had recently quitted the Orient, a place made

none too safe for me by bitter misrepresentations of certain of my activities. Even now, perhaps, the name of Dan Armour may cause a curious quickening of interest, long dormant, in stories left current by my sudden disappearance.

However that may be, there was nothing mysterious in my choice of Mexico as the land of my immediate future. I was drawn by visions of the lazy somnolence of the Central American country. The whispers caused me to search out carefully all the legends of the strange little valley, and these formed a picture so intriguing that I could not resist its allure. The mystery of the disappearances served only to whet my desire, for to me it seemed quite likely that the missing wanderers had chosen to remain in the valley rather than to leave a spot so peaceful—and I, too, longed for peace.

A long, difficult trek across the rugged wastelands encircling the valley brought me at last to its rim. Utterly weary after the arduous trip, I camped in a sheltered spot, rested for a week, and studied, through field glasses, the native village which nestled on the valley floor about two miles away. I was glad I had managed to bring all I would need for an extended stay, for thoughts of the return trip over the hot sand and rocks held no attraction.

The people below were well developed physically, but they seemed oddly lethargic, moving slowly about the village at their tasks. Seldom there floated up the sound of a shout made faint by distance; and even when a hunting party returned from foraging, no great enthusiasm was apparent in the welcome extended by the rest of the tribe. Only on the seventh day was there any change: I noticed signs of unusual activity, as though preparations for some important event were proceeding.

● I was watching the kindling of a number of fires when a touch on my arm startled me. Springing erect, I saw that a half-dozen natives had approached. They did not seem at all hostile, nor did they appear surprised or displeased at finding me; they merely accepted my presence as a matter of course. By signs, they indicated that I was to accompany them to the village.

With what dignity I could assume, I accepted their invitation. Carrying my pack, we set out. The trail at times precluded sight of the village, but upon our arrival, I saw that an image had been erected near each of the fires. Around these the villagers were dancing. As we drew closer, I observed that the dance was religious in its significance, for it was accompanied by measured music from rude instruments and the dance steps appeared to follow a rigidly prescribed formula.

Ceremony was utterly lacking in the welcome accorded me by the tribal chieftain, who motioned that I was to witness the dance. So casual a reception was bewildering, but I soon forgot this sensation in my interest in the scene.

The fires evidently represented the sun for both its light- and heat-giving qualities. The dancers slowly encircled each in turn, first attending, ironically, the least important of the idols, then that next in importance, and so on. I was surprised to note that the smallest post was carved to represent a fish. For what conception could this tribe have of the huge fish-creatures that roam the seas? A ram, a goat, a bull, an ape, and many other creatures were caricatured. An octopus spread its tentacles near the emblem of a tree. Combinations of these idols formed connecting links from one to another, and all looked grotesque in the firelight. Last of all, a serpent-god looked with eyes of ancient wisdom down upon the indifferent dancers.

The ceremony was not performed with the fervor usually attendant upon such occasions. Finally I grasped the amazing fact that indifference to the significance of the ceremony constituted its chief value. The keynote of the ritual was mockery—mockery of each and all of the things represented! This indifference must have been built up through generations upon generations of mock-worship. But why?

● That question was but one of many which gave me food for thought during the ensuing month. After the ceremony, the tribe settled into its wonted existence and nothing of consequence occurred. I often wondered what objective these people could have, for they lived on from day to day, purposeless, calm, neither rising to ecstasies of delight nor descending to depths of despair in any way. They lived as though they had all eternity in which to work out their destiny.

With nothing else to do, I rapidly learned their language which, to my further mystification, I found to be far older than any other tongue I had ever heard.

While camped upon the valley's rim, I had often wondered at the leisurely actions of the natives. They had seemed never to hurry. Yet one day I was astonished to discover that this impression had faded, for I found their motions quite as swift as my own.

At the end of the month, I noticed a subtle change in the manner in which I was regarded by those natives with whom I came in contact. It was as though they had been awaiting some eventuality all this time, and, failing its occurrence, were bent on pursuing some predetermined course. Now I understood certain veiled inquiries the chief had made as to my connections with the outer world, to which I had answered that I was quite alone. And even though I now realized this to be the reply for which he had hoped, I was not sorry I had told him. Possibly something would occur to give me a clue to the mystery of these strange people. There was nothing sinister or menacing about them and, perhaps because of my intimacy with their strange purposelessness, I was possessed of a curious fatalism; I cared not for what might happen.

I was not surprised when preparations were made for a two days' journey. Early one sunny morning, a small party, including the chief and myself, set out toward the far end of the valley. After about nine hours of travel, we came to a waterfall. As we approached it, the Indians became even quieter than usual. An oblong cavity in the stone wall near the cascade engaged their attention and, dropping their packs, they accorded it a most respectful obeisance. Following this ceremony, which was imbued with a profound reverence utterly foreign to their attitude toward the images in the village, the natives led the way through the waterfall, entering a passageway behind it.

My first glance informed me that the passageway had been worn smooth along its floor and walls by the constant passage of people. In countless years, their bodies had almost totally obliterated certain carvings on the walls. Such pictographs as had escaped this steady erasure seemed to have been wantonly destroyed. My curiosity was tantalized by glimpses of strange portrayals of beings unlike any I had ever seen before, but my companions paid them no attention, pressing onward at a leisurely but steady pace. We stopped for sleep in an enlarged portion of the passageway, which, I was told, marked the completion of half our journey.

● As we progressed the following day, I found it was growing slightly difficult to breathe. There was but little circulation of air in the passage and our journey must have brought us almost to sea level, but even this did not explain the slight oppression of the atmosphere. And now I remembered a sensation similarly experienced when I had first descended into the valley from its rim.

Miles on miles stretched the passageway, and my brain reeled at thought of the prodigious labor which must have been necessary to complete it. I was growing weary when we came to our destination.

This was a huge cavern. Its roof, like an inverted bowl, sheltered the floor from a height of at least a quarter of a mile. The passageway ended thirty feet or so above the cavern's lowest level. Entering this huge cavity was like approaching the interior of a gigantic ball through a downward-slanting tube. Curiously, although the near wall curved away to indicate that the opposite wall could not be far distant, it could not be seen. It was as though an

invisible curtain were hung before the eyes, shielding the far wall from view.

I was guided along a ledge of rock to an aperture in the wall a short distance from the mouth of the tunnel. This cave-like entrance now proved to be the doorway to a miniature reproduction of the cavern, though it gave an impression of much more recent construction. In its center was a high pedestal, holding a figure that caused me to gasp involuntarily.

This was the image of a beautiful woman—girl, rather, I concluded. Of material so fashioned as to shine in the subdued light emanating from the outer cavern, it seemed a reincarnation of some ancient goddess of youth and beauty. Each feature of the beautiful face, each line of the sublime figure, each fold of the enshrouding garment, were so life-like that I at first thought her alive. She stood in an attitude of resigned calm and, gazing at her, I understood at last the quiescence of the Indians, for she seemed to command a calm acceptance of whatever might portend.

Portals branched off from this temple and through them appeared men robed like priests. These made welcome the chief and his companions and examined me as though I were an inanimate object destined to fulfill some purpose of theirs. They seemed pleased to note that I was well over six feet in height and looked strong in proportion.

Only one of the priests—he whose nobility of countenance denoted him the High Priest—gave any indication of personal interest.

"Welcome, my son," he said quietly, with a smile, and I was conscious of a warm regard which lightened the tedium of solitary confinement in a small cave, under guard.

CHAPTER II

Xenolie

● My watch had been broken in our journey through the passageway and, since day and night were without significance in this subterranean place, I had no means of measuring the passing hours. As nearly as I could judge, it was during the morning of the third day after my arrival that I was called for by a group of priests and conducted again into the temple. There all the people were gathered, looking tensely expectant. A rising tide of excitement possessed them. Different from anything I had seen in them before was their rapt anticipation.

I was guided to a niche in the temple wall, through a slit in which I could see the outer cavern. Like positions were taken by all present, some ranging themselves along the ledge of rock.

At first I could see nothing but the stone steps which led from the ledge to the floor of the cavern. Then I saw what all had been awaiting—a man who seemed to walk out of the wall below me and down the flight of steps. He never swerved in his purposeful progress, never looked to right or left, up or down, but kept his eyes steadfastly upon something in the center of the cavern which was utterly invisible to me.

Amid a tense, palpitant silence, the man paused on the bottom step as though he had encountered a barrier. He shuddered, as with uncontrollable dread, then leaned forward in an attempt to penetrate the obstruction. He stretched forth a hand and it seemed slowly to disappear! I looked away for a moment to blink my eyes clear of the haze which I thought must have momentarily obscured my vision. A second look convinced me that the hand had disappeared entirely!

A general sharp intake of breath answered the sob of despair that came to our ears. But instead of turning back from the invisible barrier, the man still endeavored to thrust his way forward, though he did not move from his tracks!

As he strove, the priests began a chant. It seemed to invoke the pity and mercy of some deity, begging that the man be allowed to penetrate the curtain to worship. Yet the chant prayed more for the sake of the people than for the man. It asked a gateway to near worship of the deity through the strife and suffering of such as he who now strove at the barrier!

Suddenly I noticed that his head had half-disappeared in the invisible veil. His struggles ceased abruptly. He appeared to be falling headlong into the haze. Yet his fall was so slow that I wondered if something were supporting him, allowing him to fall forward only by scarcely perceptible degrees.

A great sob came from the worshipers. Five or six of the priests emerged onto the rock-shelf and descended the steps, walking cautiously in the man's direction. They grasped his inert legs and pulled him slowly from the curtain. It was like extricating a man from quicksand: they could not draw him out swiftly without stretching or severing his head and arms; they had to draw him gradually toward them. I was conscious of the hair rising stiffly on the nape of my neck as, with nerves eerily tensed, I watched the head drawn out, lolling inertly, then the arms, inch by inch, then the hands.

Long-drawn sighs arose when the extrication had been accomplished and the priests had hastily carried their burden into the temple. Turning from our niches, we faced the pedestal on which the statue reigned. Before her, below the level of her perfectly formed bare feet, they laid the inanimate figure on an altar.

● All knelt. The High Priest intoned an introductory chant, his words punctuated by deep bell-notes of a gong.

"O Xenolie! Flower of Eternal Paradise! Goddess of Youth! Golden Immortal! Unapproachable! Last Gift of the Gods! Incomparable One! Hear us!"

And, "Hear us!" echoed the worshipers.

"Harken once again to the prayer that has been offered through the years by countless generations of worshipers! Give your gracious understanding to our supplication! Smile upon your children! Have compassion for the dying remnants of a once great race! Come to us!"

And again the worshipers echoed, "Come to us, Xenolie!"

The High Priest paused. Silently he stood with closed eyes as though summoning the story from recesses of memory, then:

"Cast back your thoughts through the eons, O Xenolie! Dream of when mankind was young! Turn back the leaves of memory and give me inspiration to tell of them once again! Remember—and pity us!"

The kneeling throng began to hum in a curious, low monotone, vague and shadowy in sound as the beginning of all things.

"Life here began when our earliest ancestors sought the trees as their homes to prolong their lives, when the first hideous monsters of the era of horror roamed the Earth and filled the lives of men with danger, when those who could not find trees enough for homes searched out the mountain fastnesses to protect themselves. Then it was that our forebears found the Word. And Huantal, the Inspired, interpreted the Word and started the work that is to bring to mankind the Kingdom of the Earth. For is it not written that through the toil of early ages you shall be revealed to us, Xenolie?

"After Huantal had pointed out the way for the sons of the Chosen, successive generations pecked and quarried at the passageway to your Shrine; each king in turn guided his people's labor, and carved on the walls the story of the work during his reign. The history remained for the good of future generations until the wicked king, Questal, ordered its obliteration. But even his evil memory was not sufficient to drive from the minds of your people the object of the work, O Golden Immortal!

"When the tunnel was complete, what rejoicing there was among your people! What worship at your Shrine! And when those who had solved the Secret first saw you, what joy was then! But you slept so long that your people strayed from the path of righteousness. Then it was that the sons of men went out into the world and stayed—stayed so long that many forgot their ancestry.

"In those days, the Earth was troubled. It trembled and was sore, for its very life

was altered by the Gods, filled with anger at those who had deserted you. Many races of mankind were lost when great continents sank beneath the waves and rocky mountain ranges reared themselves to rival those forming the home of your people, Incomparable One. It was then that you were seen to rise from your couch and watch over your people!

"But messengers, sent out into the world to gather all peoples to see you in awakened majesty, found that great oceans had barred the errant ones from ever returning. Even that awful warning did not stay the emigration of the race, for they peopled the two continents which your Shrine divides. Those who settled nearest your Shrine became the highest civilizations on the two continents, but they worshiped upstart gods who were unable to prevent the wrath of the true Gods from crumbling their civilizations to dust! Then, in great ships, came men from far lands who crushed the peoples who had so lately forsaken you.

"At last, only those faithful ones were left who worshiped you and stayed near your Shrine to keep burning the flame of worship for the old Gods. And now only their children, faithful still, but ah! how few, still live; and those are we, Xenolie!

"So save us! Listen to our prayer! Come to us! Let the sunshine of your presence brighten life for the few remaining years of our dying race! Appear in your natural form from out the shades of your Shrine and comfort us with the music of your voice! Let your words of age-old wisdom show us that you still love us!"

The voice of the old priest trembled, was silent. A long-pent sigh of longing rose from the kneeling throng.

"Today was sacrificed in your name a youth from the outer world, O Flower of Eternal Paradise," the priest intoned, recovering his voice. "For is it not written that one shall come from the world's highest race, who shall be the means to bring you to us? And is it not written that you shall be willing to become as a mortal for the sake of your children? But the time is not yet, for the youth is dead. May his spirit rest forever in peace, as must the souls of all who look upon you and believe!"

He lifted his voice in a chant that was strengthened by the voices of the worshipers. Two priests lifted the body down from the altar and carried it away through one of the portals.

A steadfast light, emanating from the great cavern, kept darkness in abeyance always. Only in the pasageways inside the temple were torches necessary, and these, ever burning, cast flickering shadows over the silent people.

• I was led, wondering, back to my room.

Had this tribe existed such untold ages? The mere thought of the countless years staggered my imagination. Could it be that this valley was the source of many world nations, that it had produced men who had, in turn, made possible great civilizations?

Greatly, too, did I wonder at the ceremony I had just witnessed. Was the statue before which all had knelt, an image of their Goddess who, from their prayer, must be supposed to dwell in the seeming void of the great cavern? They seemed to look upon her as the emblem of eternal youth; but if this were so, she must be a true Immortal, for none other could have existed so long.

Thinking of the beautiful image and wondering dreamily of what had been said about a youth coming from the outer world, I fell asleep.

The next day the High Priest came to me.

"My son," he said, with the sad expression that never entirely left his face, "yesterday you witnessed the death of one of your own race. Yet, in spite of what you saw, I swear that he died voluntarily, happily. It is to be your privilege to emulate him if you are no more fortunate than he in penetrating the Veil."

I said nothing. Countless questions came to mind, but I could not voice them, vague and formless as they were.

"You have heard the story of our

tribe," the priest went on, "and from it you can judge if we would be so ignoble as to sentence you to any meaningless death. On the contrary, you will have a chance for a life far greater than any man before you has known. It is a gamble. Either you will receive this glorious life as reward, or you will die as did the youth."

Awaiting no reply, he turned away.

Later, a curious slumber overwhelmed me. Without warning, my eyelids dropped and I fell asleep as I sat. Yet, though the stupor was so deep that I heard and felt nothing, I had a sensation of being led down an inner flight of steps to a little cell near the foot of the basin which housed the Unknown.

When I awoke, I was powerless to move. Strive as I did, I could not command my muscles to function. It was as though I were imbedded in cement, each nerve and muscle paralyzed into something akin to stone. And, too, my eyes were fixed rigidly on a spot, hazy, nebulous, in the midst of the Veil.

For a long time I saw nothing. Yet I had a strange impression that sight of something was slowly coming to me. It seemed that my eyes, in their fixed rigidity, were now capable of seeing things quite invisible to them in ordinary circumstances. Soon I became certain that, if I looked long enough, I would see something oddly familiar—something precious as the breath of life!

After many hours of strained watching, the outlines of a shadowy figure appeared in the midst of the void. It could not have been more than seventy yards from me and it soon became distinct, as if I were gazing through crystal-clear air for that distance. The entire picture was bathed in brilliant light so mirrored from one surface to another as to make all objects stand out distinctly, without casting shadows.

● For a bewildered moment, I thought that I was gazing at the statue; that through obscure arts, my fixed gaze had been diverted through some mysterious medium into the center of the temple itself. Then I saw that such an impression was wholly wrong, for behind the Goddess on this pedestal was a couch heaped with cushioned covers so strange as to make me wonder if I were actually seeing them. On either side of her was a vase enscrolled with curious hieroglyphics.

The beauty of the statue in the temple had been breath-taking in its power to arouse a depth of emotion utterly foreign to me before my sight of it. But infinitely more beautiful was the idol at which I was now staring, for this image seemed endowed with life—life so vital, so overwhelmingly sweet, as to create in my heart desire that life might be eternal, that my eyes might never fail me, and that my lot might be ever to see this radiant vision.

I thought she was young—certainly not more than twenty years had passed in her life. And the thought was sweet! Golden hair enshrouded her lissom figure to her feet and framed a face so hauntingly beautiful as to cause my heart to contract with exquisite pain, much as would a poignant melody played by a master musician. Her eyes, I thought, though the distance made actual sight impossible, were of that deep, dark blue that makes one think of the blue of the sky in the dying moments of a glotious sunset viewed from a valley already in shadow. Her hands and feet were small, almost fragile in their delicate symmetry. Her figure combined the grace of a gazelle with the ethereal beauty of a bird of golden plumage. And this—this was Xenolie!

The Goddess was not standing erect as was her image in the temple; she was bending as though to set upright one of the vases which was slowly toppling. Slowly there grew on her lovely face the expression of an emotion that could have been nothing but apprehension for the consequences of her act in upsetting it. Fascinated, I watched for hours as the vase fell and the hand of Xenolie slowly followed its downward passage.

Yet only subconsciously did I note the significance of her action. I was too deeply absorbed in contemplation of the enchant-

ing vision she presented. Forgotten were eye-strain and weariness, forgotten all the world. Caressingly, worshipfully, rapturously intent, I watched—watched until the sudden slumber came again—until the vision faded in the flash of intense pain the act of closing my eyes occasioned.

CHAPTER III

The Goddess Speaks!

● When I awoke, I was in my old cell in the temple. The High Priest was bending over me, concern and sadness in his glance. Even the eagerness that flamed unconcealed in my eyes seemed to cause him pain.

"My son," he said, slowly, "you have seen. Do you wonder now that I told you the youth died happily?"

"I do not understand," I returned. "He must have seen what I saw; yet, what connection can there be between the vision and his death?"

"Only this," explained the old priest. "The Veil presents to us an invisible barrier. What this barrier is, we have never been able to discover. It seems penetrable, but once any vital bodily organ has entered, sure death ensues. Our old legends and the Word of the Gods foretell that the barrier shall be penetrated, as I have said, by a youth from the outer world. And, at the appointed time, the will of the Gods must be served!

"When that day comes, Xenolie shall come—a mortal—to her people. And she shall die even as we.

"The Word, which is the source of our higher knowledge, has given us the ritual to be observed when an attempt is to be made to enter the Veil: the youth is placed in a hypnotic state which induces a condition of paralysis in all bodily organs except eyes and brain. He is then placed in such a position that, if he is devout and keeps faithful vigil for sight of her, he will see the Goddess. If pleased, she will converse with him. When he feels that he can penetrate the Veil, he is freed and allowed to make the attempt. The youth was but one of many who have tried; but he failed, as did they."

"You have often mentioned the 'Word,'" I observed. "I understand that it must be your Book of Religion, but what is its origin?"

"The Word was found when our ancestors came to the valley. Our first king discovered it in a wondrous crystal case on the rock wall by the waterfall. For centuries none could decipher it, but at last, our wisest king, Huantal, interpreted the Holy Parchment. It told of how the Gods who set the Book in the valley had placed, in a cavern far under the valley floor, a Goddess who would live through all the ages the tribe could endure. It gave instructions for finding the Shrine and promised that the Goddess would permit herself to be seen by her true worshipers through their faithful vigil. Huantal read the prophecy of the coming of a youth from the outer world—signal that the time would have come when the people, as guardians of her Shrine throughout the ages, would have merited a great boon. As an emblem of the God's pleasure with the way in which their Word would have been fulfilled, Xenolie would come, a mortal even as they, to her worshipers.

"Huantal started the work of the passageway, and it was completed ages after the Gods raised him to their Place. Mark of the approval of the Gods for completion of it was the gift of longevity for our race; formerly we averaged fifty years of life—now we look forward to at least ninety years before Death claims us. All through the centuries we have guarded the Shrine. Of the family of High Priests of which I am the last, never has the oldest son forsaken the valley. But the prophecy must be fulfilled before I die, for I have no son!"

● An agony of sadness revealed in his tone, he turned sorrowfully away; and now I understood his grief.

All that day I lay on the rude couch, recuperating from the ordeal of the paralysis. Fitful day-dreams constantly recurred, most of them pleasant, but some arous-

ing an uncertain feeling of chill horror. Finally I fell asleep, only to dream a distorted version of the situation in the valley.

Once again I seemed to find myself in a niche in the temple, gazing at the statue of the Goddess. As I looked, there appeared in her hands a manuscript bound, book-like, between stiff covers of some unknown material. Of its own volition, seemingly, the book opened; and from it came writhing mighty tentacles. Fascinatedly I watched those snake-like appendages and followed them back to their source, only to discover that the book had transformed itself into the body of an octopus. Slowly the monster grew larger before my eyes until the statue of Xenolie was hidden deep within the black shadow it cast and the dark shape dominated the room from its position on the pedestal.

The niche from which I viewed the scene receded to a distance. The temple itself expanded; its walls grew transparent, hazy. The tentacles of the octopus reached through the walls, stretched interminably until they reached the floor of the valley far above. Each of them grasped a priest. Immediately, new tentacles sprouted from each priest's body and stretched forth to gather Indians. This process went on until every member of the tribe was controlled by the octopus in the temple.

I had the impression of the passing of many, many years. The Indians went about their tasks unconcernedly, quite as though they were unconscious of the relentless grasp in which they were held. At intervals, however, a number of the Indians converged into a group. Then only did they seem to sense the control being exercised over them; and they struggled in revolt. When this happened, an entire branch of the maze-like tentacles suddenly broke, loosing a large number of Indians from their captivity. These ran to the edge of the valley and disappeared over its rim. Only a lonely tentacle followed them; sometimes it returned to the master-body; sometimes it withered and died. Those that returned were transformed by the priests into the objects which became the images in the village around which the villagers danced. These images were always reviled; genuine obeisance was made only to the shape in the temple.

In time, the Indians who arose in revolt became fewer and fewer; a lethargy possessed them all. With none to struggle against them, the tentacles relaxed, became soft and velvety; but still they drew. Finally they became mere hazy threads. I looked toward the monster on the pedestal. It was now only a shadow; and even as I watched, it grew lighter. Behind it, a light began to glow. Brighter and brighter it beamed, until its radiance dispersed entirely the haze that the octopus had become. Soon the brilliance assumed the form of the statue of Xenolie. But the book was hidden—perhaps within the statue.

I looked for the Indians, who were wandering aimlessly about, seldom venturing so far as the valley's rim. A few of them gathered about the statue; others congregated in the village. I was shaken by a great surge of pity for them; their inarticulate sadness wrought within me an answering emotion of deep sympathy. They seemed so much like lost children—living in a peaceful world of their own, indifferent to all the tremendous things I dimly saw taking place at a distance all about them, secure in their faith, fated only to survive so long as their Goddess remained immortal, doomed to extinction when she answered their prayer for her coming—to release them.

I awoke with a sensation of unutterable sorrow. For a long time I lay thinking of the dream, comparing it with what I knew to be true of the valley. The whole panorama seemed to typify the eternal strife of man after an ideal—an ideal futile since it could be but mortal even in its entirety, yet full of hope, of joy, of pain, of despair, of all the emotions that mortals will ever feel—an answer to some nebulous thought of the Creator.

With the conviction that my dream pre-

sented a key to the riddle of the valley, I fell asleep, possessed by a sense of the coming of an inevitable, profound peace.

● Soon after I awoke, the old priest visited me.

"My son," he said, "you must try to speak with the Goddess when next you see her. Do your best to tell her of us; you are the medium through whom we can hope that she will come to us at last. All before you have failed. Many have said that they spoke with Xenolie, but they lied; and when we permitted them to try to go to her, they died for their lies."

"But she is too far away to hear what I say," I objected. "And even if she were near, I could not speak, for my lips are paralyzed. I cannot move a single muscle."

"It is not with the tongue that you must speak. Forget that you have a tongue! Only thoughts can Xenolie hear; you must pray her to listen. Speech is man-made; do you expect the Gods to descend to such crude means of communication? Do not think your thoughts in mere words; think your emotions until you can learn to express them in thought-pictures. It is much like this: ordinarily you would think in the words of your mother tongue. Instead, you must elevate your thoughts to a higher plane and send forth perfectly formed pictures much as you would utter words with your tongue and lips. Do you understand?"

"I think I do," I answered slowly. "But I am a man of action—not of thought. How can I best do as you say?"

"The Word says, 'Before you act, you must think, if only subconsciously. Instead of thinking for the purpose of physical action, form your thoughts for the sole purpose of building up an action of thought. *Think* your way into the consciousness of the Goddess; make her understand your presence.'"

When the priest had gone, I spent a long time in readjusting my conceptions of thought. There was wisdom in his words, and since he had received his knowledge from the Word which was so closely connected with everything concerning the Goddess, I determined to put the theory into practice. The idea of possessing the power to project my thoughts into the consciousness of the Goddess was as the prospect of clear, sparkling water to a man dying of thirst in the desert.

The slumber-sensation came again that night. Again I sat and watched for the moment in which sight of the Goddess would come to me. But this time I did not wait until I could see her before beginning thought of her. Instead, I willed with all my heart that she visualize me as I sat watching.

And my thoughts were answered! She was looking toward me with a slowly dawning expression of comprehension on her face. My thoughts began leaping wildly from one thing to another until I noticed that her expression was altering to one of bewilderment. Then I realized that I must think very slowly and give her time to understand each thought before proceeding to the next.

I was so excited that my mind became blank for a moment with the wonder of the thing. In that moment, I clearly received the impression that I was being asked to detail my surroundings a little more distinctly. This could be nothing but a message from Xenolie, and my emotion almost broke the bonds of the paralysis. I did my best to explain the little cell-like niche in the wall of the cavern from which I viewed the Veil. A little later I noticed that her eyes were fixed in my direction. Finally I could tell from her expression that she had glimpsed me.

At once I sent another message, asking her—of all things—how old she was! Her attempted explanation was utterly beyond my comprehension, and she was still trying to make it clear to me when my eyelids closed again.

● When I awoke, two weeks had passed as measured by the old priest's candles. I felt very weak and was amazed at thought of how much energy my eyes and brain had required. I told the old priest of what had happened, and he called all the people to hear what I had to say. The

priest looked upon me almost with reverence, and the people regarded me with an awed wonder equal to that which I felt when I thought of the ages their race had endured.

Intermittently during some weeks I held communion with the Goddess. As the days progressed, I noticed that the conversations required less and less time until it took only a few minutes for a transfer of thought-messages between us.

The people of the valley, too, had changed. It was quite the usual thing to see a number of them gazing reverentially toward that place in the Veil where Xenolie was. As a shock to me came the revelation that they were growing weaker physically. Almost as I watched them, they seemed to age. Longer and longer became the vigils they undertook at the Shrine; longer and longer grew the periods of worship held in the little temple.

The old priest came to me one day.

"My son," he addressed me, as always, "you must ask Xenolie to come to us very soon. Have you noticed that the number of the people is growing less? Yes," at my startled look, "many are dying. The Word is not very clear on the point, but it does say that the days of the people are numbered when they have called upon Xenolie to come to them. I do not think that they care, though. They are joyful at thought that they, of all the people of all the ages, are to be those favored to see Xenolie assume mortal shape and walk among them. Perhaps the wisdom of the outer world will enable you to understand why this should be. Should it do so, say nothing. But you must—you *must* entreat Xenolie to come!"

I gulped back a lump in my throat, for I was almost overwhelmed with sorrow and I knew that Death would not be satisfied with a few.

"I will speak with Xenolie again," I promised, "and tell her of the longing of her people. And I think that she will come."

What I had learned in the valley and from the Goddess made me feel the time had come when preparations should be made for Xenolie to leave the Shrine. A combination of the jumbled threads of information presented a solution to the mystery of the Shrine.

CHAPTER IV

The Coming of the Nebula

● Xenolie is one of a great race which lived on Earth untold eons in the past. This people built up a magnificent civilization controlling all the inhabitable parts of the world. Many centuries before Xenolie was born, her people had passed through that degree of civilization which requires above all, mastery of physical laws; they had built great cities, had invented marvelous instruments and machines, and had achieved a highly complex social system. In Xenolie's time, however, her people realized that all this complexity of structure was nothing but a burden: its very efficiency made life increasingly a routine affair which left no time for accomplishments that really advance a race. A great leader arose to show them how to create, in place of this mechanical existence, a higher and finer type of life founded upon understanding of certain mental powers. Soon their mental science enabled them to understand one another without recourse to speech, though they retained an oral and a written language. They developed the fine arts almost to that perfection which was their goal in all things. Combined with their knowledge of physical laws, their mastery of purely mental phenomena enabled them so to stimulate artificially the processes of nature as to control the production of many things whose production by nature is yet a mystery to our present civilization.

At that period in the unfolding of the universe, the matter composing Earth and all upon it existed at a much slower time-rate than that at which it now exists—or it may be more true to the facts of time to say that matter *appeared* so to exist. For all matter on Earth has its existence at a time-rate consistent with its purpose in being; and time, to an intelligent being,

is merely that quality which gives him his perspective of events occurring all about him. This being so, the perspective of Xenolie's race is all that need concern us. To her people day and night appeared not to exist separately; they so merged as to make the world seem enshrouded in a continual half-light, a sort of perpetual dusk. Its periods regulated in proportion to the normal intervals intervening between eating and sleeping—their slower life-rate limiting them in that her people had but little knowledge of astronomy—a mechanical chronometer measured their conception of the passing of time quite as well as our clocks measure time for us in relation to day and night and such other cyclic events as appear in our perspective.

Into the midst of their peaceful, happy existence were injected the sorrow and unrest occasioned by prospect of a frightful change. For some time, the usual gray of the skies had been lightened by a rosy radiance. A scientist who had been studying the cause of this phenomenon explained that it foretold the approach of a gaseous nebula, of negligible mass but of enormous extent. It was coming very slowly, but Earth would soon be engulfed in the space wanderer; and the peculiar quality of the gas composing the nebula would entirely change the planet.

● As an introduction to the presentation of his theory, the man of science reminded the people that the Earth with its atmosphere—and, indeed, all space and all matter—is inherently pervaded by the luminiferous ether. His theory postulated the luminiferous ether to be that medium which, in its eternal flow throughout infinity, controls the occurrence of events and is, therefore, the basis of time. Then he predicted that the gas of the nebula would so react upon that portion of the luminiferous ether permeating and surrounding any matter in the path of the nebula, as to accelerate the existence-rate of that matter and alter the life-current of its fundamental structure. The physical structure of matter would remain unaltered, but the time-element—or, to give it its proper name, the luminiferous ether—in and of which that matter had its existence, would be revitalized, and consequently accelerated in its flow. All forms of life would not be exterminated immediately, but the change from the slow rate to one incalculably faster would so weaken the life-energy of matter as to shorten life, even in proportion to the faster rate at which it must be lived.

Applying this prospect to their lives, the scientist indicated that their wonderful civilization was doomed, for no substance, however soundly constructed, could resist the insidious quickening of its life-rate. Once matter had an opportunity to adjust itself to the new condition, rehabilitation would inevitably come. His speech left no room for doubt that he despaired of their race living through the impending chaos.

Faced with this dilemma, the people revealed the morale their near-Utopian civilization had instilled. Instead of giving way to blind panic, they accepted, with that enlightened fortitude which surpasses mere resignation, the grim prospect of annihilation. But they did not despair of leaving some record of their glory.

Knowing that it was hopeless to attempt to safeguard any considerable portion of their population against the ravages attendant upon the change, their scientists directed the energies of the race to the task of preparing some means for the preservation of a representative to serve whatever race emerged from the coming catastrophe to raise man once more to his lofty pinnacle as reigning intelligence on the globe. By means of those instruments which had enabled them to study the nebula, they knew of the existence of the sun and the moon—though their conception of these heavenly bodies could not have been like ours—and even as they had studied the effects of certain rays of both sun and moon, so they analyzed the gas of the nebula. And though they had no samples of the gas on which to experiment with a view to nullifying its effects, they soon evolved means whereby they might preserve their representative.

By directing high frequency rays of tremendous power upon the mountain in which they proposed to place their representative for safekeeping, they reduced certain localized sections to a state of plasticity. Great machines gouged out a passageway down as far as sea level and tore away from the foundations of the great mountain that vast amount of rock whose absence created the "Shrine." Working in conjunction with the great ray generators, engineers, looking like puny midgets in comparison with the gigantic machines, distributed the tremendous quantity of rock so obtained over a considerable area about the valley which formed their base of operations. A system of lighting was placed within the Shrine, together with a plumbing system, supplies, books, and other comforts sufficient to ensure the welfare of the Shrine's occupant during a period equal to about one-twentieth of the average lifetime of one of their race.

It was supposed that the best way of ensuring the accomplishment of the prodigious labor necessary to locate the Shrine and free its occupant was to imbue the entire affair with a religious significance. Finding the Shrine and its contents would, it was believed, amply repay its discoverers for their toil. To that end, a scientist, Alon, was given the task of writing out, in religious vein, the story that would lead to the location of the Shrine, embodying many prophesies which their knowledge of science enabled them to predict would come about when the passageway was complete.

● Before the arrival of the nebula, sufficient of the atmosphere was enclosed within the cavern to keep life normal for the occupant during the time he would remain there. Chemicals for renewing the oxygen of the air were adjusted to keep the atmosphere constantly fresh. The process by which the rock walls of the Shrine were plasticized rendered them, as they resolidified, impervious to penetration by the gas of the nebula.

During the completion of these preparations, it was decided that upon Alon should devolve the great honor and responsibility of being the dweller in the Shrine. Immediately upon hearing the choice of the people, he retired to his home to make ready, it was supposed, for his long imprisonment. Only at rare intervals did he appear, and for short periods of time. Just before the arrival of the nebula, Alon took up his residence within the Shrine.

A lightly constructed, enclosed shelter, insulated against the effects of the gas of the nebula, was erected in the valley in connection with the tunnel leading to the Shrine, for the scientists wished to experiment on the gas itself to make certain beyond possibility of error that they were right in their analysis of it before sealing the Shrine upon Alon. In this way the time-element between the Shrine and the sheltered part of the valley would be the same.

The experiments, conducted as soon as possible after the nebula enshrouded the Earth, indicated that, once the atmosphere was mixed with the gas, the combination could not in turn combine freely with undiluted portions of the Earth's old atmosphere. This gave rise to perplexity as to how it would be possible for Alon, when the Shrine had been opened to the world of the distant future, to increase the speed of his existence to approach that of the outer world. Finally two large, cone-shaped projectiles, their mouths timed to open when they were outside the Earth's atmosphere and in the body proper of the nebula, were shot, in a carefully calculated parabola, into the gaseous body. There they gathered a cargo of the undiluted gas. This was concentrated chemically so that it could be kept in two large vases which were placed in the Shrine for Alon's use at the proper time.

Those working in connection with the Shrine were provided with insulated suits in order that they might, when the Shrine was sealed, introduce into the suits sufficient of the undiluted gas to quicken their existence-rate to that of those in the outer world. Alon's daughter had been

permitted to stay in the Shrine with him up to the time when he must depart. At that time, her figure, garbed in one of the suits, was seen to emerge from the mouth of the passageway. She waved her hand, which was the signal to the anxiously waiting engineers that all was ready. At once the great machines were started, the passageway to the Shrine was filled in with the plastic rock, and the mountain was resolidified, the same in appearance as before the cavern had been created in its heart, but bearing now the precious representative of a race.

But the people had failed to take into consideration one thing. Beyond anything that might accrue to him in either his own time or that of the world into which he was to journey, Alon loved his motherless daughter, Xenolie. To accompany him on his journey, a wonderfully sculptured image of her had been placed in the Shrine near the mouth of the passageway; but even this seemed poor compensation for the loss of his daughter. And so, on the fateful eve of his departure, it was Xenolie who occupied the Shrine, for Alon had been unable to resist the temptation to give to his loved one the great destiny that was to have been his.

Secretly, in the time during which the people had thought him preparing for the journey, Alon had prepared a duplicate of the Word shown to the scientists, substituting, in place of references to a male god, passages referring to a Goddess, Xenolie; and it was this duplicate which had been placed in the crystal case on the valley wall. Knowing that Xenolie would never have consented to his great sacrifice and fearing lest she urge his duty, Alon had drugged her at the last moment and, after a final loving kiss, had departed. He knew it would be hopeless to attempt to get in touch with her by mental telepathy for he would have lived the remainder of his life long before she should have awakened from her trance. But even he did not foresee that the solidifying of the rock would cause it to expand, thus contracting and compressing the atmosphere within the Shrine sufficiently to change Xenolie's drugged state to one almost of suspended animation. Since a much longer time than had been anticipated elapsed before the Indians reached the Shrine, it was well that the miscalculation had occurred.

● When wonderingly she awakened, and realized what had happened, Xenolie wept inconsolably. She prayed to the Supreme Being for the repose of her father and the great race who must long since have become age-old dust after having fulfilled their intention to make the valley fertile and attractive to those who must come to free her. She thought much of these things, and her thoughts—ponderous, forceful, and inspiring as they must have been to the prayerful, subconscious minds of the Indian priests who lived at that time—had a subtle effect upon them. Xenolie, too, was conscious from time to time of sudden moods—some gentle, some exalted, some depressed—caused, though she did not realize it, by the mass worship of the Indians.

At last she reasoned that the time must have come for the vases to be emptied; and, though she hesitated fearfully at thought of the unknown world upon which she would be cast, she finally upset one of them, then the other, releasing the gas.

At intervals thereafter, she caught sight of me and told me of herself, her mastery of mental telepathy making possible communication between us, for her sensitive mind greatly aided me. None of the youths who had preceded me had she seen, for none had succeeded in establishing that mental rapport which was a necessary preliminary to prepare her to look in the right place for her admirers.

These particulars answered all the riddles I had encountered in the valley and in the Shrine itself. The longevity of the Indians was explained by the partial merging of the two atmospheres, quickening in some degree the life-rate of the matter composing the Shrine and its beautiful occupant and slowing, in like degree, the rate at which the valley dwell-

ers lived. Penetration of the Veil had been impossible because of the conflicting time-elements of those organs which had penetrated and those not yet accelerated. That I had been unable to see Xenolie without staring for hours at one spot in the Veil was natural, since my eyes, used to seeing things existing at my own time-rate, were incapable of adjusting themselves otherwise to the visualization of objects within the Veil.

It was apparent that Xenolie must come away from the Shrine soon if she were to fulfill the expectations of the Indians during their lifetime or hers. For even as the old race had been depleted with the coming of the "quick-life," so must it wither the lives of all in the valley who came in contact with it. I believed that the two atmospheres had approached sufficiently near each other's rate of existence to permit the passage of a human being from one to the other. There was still considerable uncertainty that I was right, but further delay might be disastrous.

Gently I told Xenolie what I could of my conjectures and described to her the situation outside the Veil. She readily understood and promised to prepare to leave the Shrine. We arranged a time at which I should come to bring her to her worshipers.

CHAPTER V
Through the Veil

● On the day appointed, all the people gathered in the cavern, leaving the valley deserted. They were ranged in the temple niches and all along the ledge of rock, in number only about two hundred, men, women, and children. Tears came unbidden to my eyes at sight of so few, and and a great, throbbing lump arose in my throat as I noticed their apparent frailty and the ethereally calm look of contentment, pride, and anticipation that illumined every face.

I stood alone at the top of the steps leading to the floor of the Shrine. At the hour set, I began the descent. Through the Veil I could see a shadow that I knew was Xenolie coming toward me, and I kept my thoughts constantly in touch with hers. I felt her trepidation and lent her all the strength at my command. And soon, with a quickening of my own heartbeats, I felt myself on the edge of the Veil.

From the ledge above sounded the great sigh of the worshipers. Led by the High Priest, they began their humming chant, its low tones expressing a yearning greater, it seemed to me, than the human heart could long support. The humming grew louder as I pressed my hands into the Veil; it was as though the people were bending their every energy to the task of helping me through it.

My hands grew curiously numb, as though the blood were driven from them. Still I did not hesitate. As I felt the Veil near my face; I drew a long, deep breath and pushed forward!

My heart seemed to stand still for a moment. I reeled. Exhaling slowly, I conserved that last breath as long as possible. And then, hardly daring to hope for life, I drew in another.

And lived! With relief as great as though I had just been granted reprieve from death, I opened eyes that I had instinctively closed as I passed through the Veil. The reeling sensation passed; the flickering spots disappeared from before my eyes and I saw Xenolie!

She was not twenty feet away, and was coming toward me at a slow walk that changed to a run when she saw that I was looking at her. Directly into my extended arms she ran, and clung to me like a frightened child. In that moment, I wondered how I could ever have thought her a goddess.

I reassured her as best I could. We could see the waiting throng quite clearly through the Veil, though when the people made any movement, the part in motion disappeared momentarily from our view, moving too swiftly for our eyes to follow. As we passed through the Veil I had so recently entered, we felt a quickening of our heartbeats and gasped for breath as though we had been running.

(Continued on page 236)

(Illustration by Paul)

Where a moment before the space-ship had lain, a great fountain of metallic fragments was rising toward heaven.

DRUSO

By FRIEDRICH FREKSA

(Translated from the German by Fletcher Pratt)

PART THREE

Conclusion

WHAT HAS GONE BEFORE:

● The story opens in the twenty-first century when the Sleepers are to be brought back to animate existence. A hundred years before, seventy-five of the greatest scientists had been put into the state of suspended animation which was to last for a century. The purpose of this deed was to preserve the knowledge of one century for the next, for books were often inaccurate and changed with the years. A great ceremony is held when these servants of Humanity awaken to an unfamiliar age. The experiment had proven so much of a success that it was decided to repeat it. Alf Bentink and his wife, Judith, sacrifice themselves to join the Sleepers who were never to see their families or friends again. When Alf awakens from the hibernation, he learns that only himself, his wife, and two others have survived—the rest could not be brought back. He is astounded to discover that they had been asleep, not for one hundred years, but for three centuries! Shortly after the chamber of the Sleepers had been sealed, a terror descended upon the earth which threatened the very existence of Mankind. From the star Druso had come a race of insect-creatures which had taken from Mankind his entire civilization and reduced him to rank barbarism, forcing him to worship the gods from the skies. Luckily, Alf and the other three had been awakened by a remnant of men who hid away in the arctic to escape the ordeals of the insect-gods. They live only in the hope that they may some day rid the earth of the terror from Druso. Through the following months, a conspiracy is developed. Then Alf's wife is captured by the Drusonians to be among the three hundred that are annually sent to Druso as sacrifices for some ghastly purpose. Alf and two of his friends go to rescue her and masquerade themselves as three of the sacrifices, planning to make some avenging step when they find themselves upon Druso. As the second part of the story closes, we find Alf and his friends realizing, by the increased gravitation, that the Drusonian space-ship is approaching the enemy planet. Alf Bentink is telling the tale in the first person. *Now go on with the story:*

● We have already been deluged with countless letters of praise from those who have read the first part of this German science-fiction classic. One reader went so far as to say that it was "the greatest story ever written; science-fiction or otherwise!"

Never before has the plot of invaders from space conquering the men of earth been so artistically handled. It fairly shrieks with genius and obliterates the merits of all preceding stories of this type.

As the concluding instalment begins, we are at a very crucial point in the story. The Drusonians have brought a cargo of sacrifices back to their alien world, little knowing that among them are three conspirators—three who plan revolt against their unwanted rulers—three who plan to rescue the earth for the use of man alone.

CHAPTER XIX

The Holy Place

● The piping of steam shrilled up to a scream. A shock; and a violent trembling.

Outside we could hear people's voices in a babble of sound. Irmfried and Flius listened attentively and the former made out words in the Mediterranean language. There was a wait, then we heard steps inside the ship itself, and suddenly one of the ship's guards stood before us. I reached for my gas-pistol, but the guard held up his hand, speaking in Atlantean and turning to reveal the blue spot under his ear.

"Quiet!" he warned, "Wait here." He pushed aside a sliding partition and pointed to a tiny space between two walls.

"Wait here! You can get to land with the rest of the people. I can't follow you, must remain on the ship, but you will find some of our people in the hall. They'll tell you what to do."

This was better than we had hoped for. We waited, listening to a tumult of voices. The crew was shepherding the human freight out of the ship, men first. Through the crack in the panel, I could see how the first one came up out of the human cargo-hold with a huge bound that carried him against the roof of the place with a bang. He tumbled back like a rubber ball, but was seized upon by two of the space-sailors who fitted a pair of the metal shoes to his feet and left him standing, rocking back and forth on his feet like a diver at the bottom of the sea. The room quickly filled up. We stepped out, mixed with the crowding people, and followed them through the door down a ramp onto a kind of mole. The air had a curious reddish tinge, as it has during an earthly sunset, and in the sky above us hung a huge star, dark red in color—the earth. To us, it seemed as though it filled a full eighth of the heavens. Around us, all the rest were watching it, too, and in all the languages of the world we heard the same words: "The earth!"

The people who surrounded us as we came ashore were no different from any similar crowd of the world. Amid a clamor of voices, they surrounded us, staring and pointing. We noticed that many of them wore metal shoes like ours, but others had a smaller type of metal shoe and still others none at all, and it was not hard to guess how long they had been on the smaller planet by the size of the footgear they wore.

Conical structures lined the mole, and at the top of each, as from a monument, one of the beetle-like Drusonians was on guard, while above the crowd of humanity flew several more with their chains of metal machines trailing behind them. A loud voice proclaimed, in all the different languages of the earth, "Left! Go into Hall 1!" We followed the bewildered sacrifices in that direction.

As I turned away from the space-ship, which lay shimmering, half in and half out of the violet-tinted water, I saw our Atlantean ship-guard above on the platform. He was making motions in the sign language of the Atlanteans and I noted that someone below was answering him.

A tall, blond man worked his way to our side. "Follow me," he whispered, his eyes fixed in another direction. Irmfried said something to him so rapidly that I did not catch it. The blond man nodded and blushed.

The hall into which he led us was partitioned off and the people were penned apart like a herd of animals, in groups of sixty. The blond man led us behind a metallic partition, turned again and opened a door. We found ourselves in a room that was evidently used for some clerical purpose.

"Wait here," he said. "There's water and food in that cupboard at the side. You must get used to that kind of nourishment."

There was a window in the room and I looked out curiously. The wall beneath the window seemed to descend to an enormous depth; evidently, the mole had been built very high for the reception of the space-ships. Down beneath lay the soil of Druso with men at work like small dots, fully two hundred feet below. They were hammering at something and one could see by the size of the enormous sledges they were using how greatly their strength had been increased by the lower gravity of the planet.

After about an hour, our guide returned. He bade us be patient as the work of unloading the space-ship was still going on, and it would be evening before he could get us out and to his house.

"Do you live freely here?" I asked, astonished.

"Freely?" he answered. "Yes, if you want to call it that. Here on Druso we have our houses and towns as on the earth, except that no tribal wars are permitted and the flying watchers keep a close check on all movements. We have our work and an enjoyable and pleasant manner of life.

Reading and writing are reserved for certain classes and forbidden to all the rest. The priests are numerous and serve the gods. There are Oracles here, just as on the earth. In the beginning, everybody does peculiar things on account of their greater strength, but they lose this after a while, usually in about six months. By this time we are acclimated, but not so discontented." He laughed. "But what is discontented? There are some people who are never content, and the Blues give the Drusonians a good deal of trouble."

"The Blues?"

"Yes, the Blues. A man named Cassaniak came to Druso some time ago. An active chap, this Cassaniak. He was the captain of a space-ship and left his ship contrary to orders. Naturally, he never came back, because he knew very well what the punishment would be. For that kind of thing it is always the same; they cut out the tongue of the offender. Cassaniak got away in spite of the chase that was made after him and hid in the Blue District. This is a range of hills and valleys to the west which have an intense blue color. Some Drusonian earthquake caused it to appear I don't know when, but not very long ago. Cassaniak knew very well that the Drusonians cannot see blue. You will have remarked that all the light here has a reddish tinge, and the case is even more pronounced when it is dark and the earth shines. Then we live in a bath of purple light."

● Now we understood why the light had taken on a deeper and stranger tone during the last hour or so. Druso was approaching its night hours. And as the sun went under the Drusonian horizon, it was as though we were all bathed in a mixture of red and yellow flames.

Flius remarked, "We guessed rightly then, when we imagined that the visual organs of the Drusonians were displaced toward the red end of the scale in comparison with our own. You know, the old Mediterranean races only learned to see blue and violet very slowly."

Vern, which was the name of our guide, went on with his tale of Cassaniak. He had managed to clothe himself in blue, and during the night hours frequently broke into houses and villages and helped himself to whatever he wanted in the way of tools, food, and weapons. He had also succeeded in gathering around him a band of like-minded spirits, though just how many, nobody knew.

From time to time, Drusonian flyers flew over the Blue District and tried to wipe out these land-pirates with electrical waves and poison gas. But the Blues, it appeared, had discovered means of hiding themselves from the effects of these means of attack, and always turned up again afterwards. The Drusonians, though they employed armed human guards on their space-ships, apparently did not believe it wise to arm their laborers against the Blues. Just at the moment, there was a good deal of excitement over them, as the Blues had burst in at the time of a big Drusonian festival and seized a number of women to carry them off.

"Why were the women kept there in the temple?" I asked.

"The Drusonians prefer human milk to any other kind of food, here as on the earth. All the laborers, by the way, usually vanish sometime between their twenty-eighth and thirtieth years of age. None of them ever comes back. The priests say that on account of their faithful service, they have been rewarded by being admitted to a locality where they never have to work any more and can enjoy themselves all day long."

"How many Drusonians are there altogether?" asked Flius.

Vern shook his head. "I don't think there are a great many."

"And why isn't there a revolt against them?"

The blond man shook his head again. "The Blues are supposed to be trying to raise one, but it's a long and difficult task. As long as the Blues cannot develop freely and undisturbed, like we Atlanteans on earth, there does not seem to be a great deal of hope."

"Have you heard anything of Judith and her child?" asked Irmfried.

"I looked through the lists, and I am certain that this woman and child have been taken into the Great Holy Place."

"The Great Holy Place?" I asked, "and what is that?"

"The Holy Place is a grove surrounded by a wide ditch and electrical protections. No one who has ever entered there has come forth again. What the Drusonians do there, we do not know."

"And how can we get into this Holy Place?" asked Flius.

The blond man shrugged his shoulders. "No one has ever gone there willingly. There are occasional caravans going in. Strong men of between twenty-eight and thirty years are shipped in with them, but none ever comes out again. Women with children are also sent there, especially good-looking and strong women. Just recently a caravan made up of new arrivals went in."

"Do the Blues have much influence?" I asked.

"Every Atlantean helps them! If we only had some certain means of communicating with the earth, I think we could free the world. Naturally, the stupid people here are afraid of the priests. They have painted in the most frightful colors the fate of one of the recently established human cities which rebelled against the gods and was punished with flame and poison. But there are other traditions that pass from mouth to mouth and some of them are not without significance. They say that a hundred years ago there were seven Holy Places on Druso. Now there are only three, two small ones, and the big one, where Judith and her daughter have been taken."

"I must get to Judith in that Holy Place," said Irmfried decisively.

The blond man answered. "Liuwenhord's daughter has only to give me orders. But first of all, we must be certain that you people from the earth are not discovered."

The purple night of Druso had now engulfed everything. We were informed that there were periods of light and dark on Druso of about six hours' duration, due to its more rapid axial rotation. The periods of work and rest were also divided in groups of six hours each.

Vern brought us workmen's smocks, which we put on over our other garments, and then we followed him up a stairway to the top of the building, where he had three rooms to himself. We were all three of us somewhat tired and ready to fall into the hammocks he provided for us by setting hooks into the wall and swinging bands of linen between them. He left us some food and water and told us he would return later; until we knew more about our surroundings, it would be better to remain in hiding.

Exhaustion made us sleep like logs, and we did not wake until Vern's entrance in the morning. He would be able, he informed us, to get Irmfried through in place of one of the other women. He had accomplished it in the easiest manner in the world, by getting hold of one of the Mediterranean women, who, lonely for her companions, had willingly agreed to let "his sister" take her place.

But what meant much more to us, Vern, with the help of some of the other Atlanteans, had succeeded in getting fairly good information about the location of the Holy Place and its approaches. He took us to the flat roof of the building and showed us the way through the city and out across the plain that surrounded it, a way lined with pagodas provided with gilded roofs. These pagodas, which were reserved for the use of the Drusonians, and as to whose exact purpose there was some doubt, led to the Great Holy Place in a direct line.

With this information, we began to search out the path with our televisors. When we did so, the use of the pagodas appeared. They were for the collection and strengthening of beam radiation, and without the slightest doubt, each pagoda was the center of a field of force. They reached out from the Holy Place in all directions, and with their aid, the Dru-

sonian guards in them could keep the whole planet under electrical control with considerable ease.

● Through the televisors, we traveled across a considerable portion of the flat plain of Druso. We discovered gardens, and trees of a type resembling our giant ferns, but enormously bigger. The coloration of the whole countryside was reminiscent of that of North Africa. There was no true green; everything was either in tones of yellow or red. Some of the trees bore a bloom not unlike that of our chestnut, but many more of them. There were no high hills, but a few green lakes and white-foaming streams, running rapidly. Finally, the televisors showed us a district surrounded by a tall metal fence. This was unquestionably the outer limit of the Holy Place. Roads ran through the fence. Next we saw a lake, surrounded by a little wood, and behind it a deeper and thicker grove. In the center of this second wood stood beehive-like buildings. We observed that around and upon them, the guard-beetles were perched on their conical towers. As Vern watched, astonished with the power of our televisor, he began suddenly to laugh. "These watchers always talk about the same things," he said.

"What are they saying?" asked Flius.

"Oh, they are running on about their supper and their breakfast. These flying beetles think of nothing but eating and drinking."

"How do you know that?"

The blond man reached out his hand, and as though the fingers were the feelers of an insect, began to make a series of movements with them. "We know this much of the language of the beetles," he explained. "They don't communicate by word of mouth, like humans; they make movements with their feelers, and they have a sound-speech for use at a distance. This is made by rubbing the feelers together. It's made up of longs and shorts, very much like the old Morse alphabet on earth. Cassaniak understands a good deal about the Drusonian language."

"Can we get in touch with this Cassaniak?" asked Flius.

"We can try."

We had now turned the televisor on the island in the lake, which was the Holy Place of the Drusonians. Everything here was arranged for the comfort of the giant insects. There were a great many of the ant-like Drusonians running about, and as we watched, we remembered that the Drusonians had declared ant hills on earth to be holy.

When we increased the concentration of the instrument, it became clear that the beehive-buildings, each of which was as big as one of the skyscrapers of bygone days on earth, was built up of small pieces of material, cleverly joined together, not in the least like any engineering work constructed by men. The giant ants were running in and out with great rapidity and they seemed to take comfort in the fact that the walls of the entrance were close enough to graze them as they passed through.

In spite of the measuring table of the televisor, it was difficult to establish just how large these ant-like creatures were. There was nothing really familiar with which to compare them. Only when one of the flying beetles approached were we able to establish the fact that the giant ants were about twice as large as they, which meant that their six legs supported a body of about nine feet in length. When this size was compared with that of their buildings, it became evident that the buildings themselves were structures of really gigantic size. But our memory of the ant-like Drusonians we had seen at Cape Town assured us that there must be at least two species of the ant-Drusonians, a smaller and a larger. Only the smaller type was seen on the earth.

Finally our televisor reached a locality entirely surrounded by trees. Here human women and girls were resting on stone benches, and on their naked bodies were tiny, ball-like beings that seemed to be tending them. But there was still nothing to show for what purpose these women

were kept there. And of Judith and the child, there was no sign.

"It's a good deal easier," remarked Flius, "to follow a ship or locate a given point with this televisor than to inspect a big city-like place with it."

"Yes, but remember that Judith has a radiophone," I reminded him, but within me there was a dull feeling of hopelessness. I feared we were too late, and hardly thinking what I did, cried out, "Judith, we have followed you!—Alf, Irmfried, Flius. Judith, answer!" For half an hour I kept it up, but there was no reply.

Irmfried comforted me. "She can't have the radiophone at her ear all the time. We must be patient."

Flius, who continued to work with the televisor, said suddenly, "I think I've got her!"

I dropped my radiophone, and if Irmfried had not caught it before it dashed to pieces on the floor, our enterprise would have been wrecked then and there. Yes, it was indeed Judith. She and another woman were being watched by an enormous insect with a great hairy body, whose belly alone was the size of a man, though its legs were no thicker than my thumb. The head, which seemed to spring from the body without any intervening neck, was about the size of a big man's fist. Its whole front was occupied by a pair of enormous eyes, and beneath the eyes there sprang forth two enormous feelers, each perhaps as much as six feet long.

Judith and the other woman were working on the animal, stroking its hairy body from top to bottom in a kind of massage.

"But where is the baby?"

Flius marked the bearings on the side of the apparatus in order to find Judith again when he wished, and in the calmest manner in the world, went on looking for the child. At first the apparatus showed us a picture of the beehive structure in which Judith was located, and then began to pick out separate cells in it. There were a good many of the giant insects with the huge bellies like that Judith had been stroking. It seemed that Irmfried was right when she declared they must be the females of the Drusonian species. In one of the cells, however, was a naked woman bent almost double, on whose lap rested the brown, oval mass of a tiny Drusonian. "She's making a cushion for it!" suggested Flius, but Irmfried shook her head. "No, look at her attitude—this woman is feeding the thing!" And she was white with horror and nausea.

We left the building and followed on into the fern park. Everywhere there were human women and girls, naked and with the little Drusonians in their laps.

"It's a nursery!" said Irmfried.

CHAPTER XX

The Drusonian Slaughter-House

● Paths radiated from a building that from its form was intended as a habitation for men and women. Its sides were open, and though we could not make out whether its sides were closed in with glass walls, we could see that each floor had a kind of latticework in front. Behind one of these latticed sides and in a little cellule, we discovered Urania, playing with other children.

Our friend Vern had let us work without saying a word. Now he remarked, rather grimly, "The Drusonians keep men here like animals in a zoological garden. Look how the Drusonians are sitting over there opposite and staring in. They are observing the actions of the young of the race of man." And he ground out, "If the Blues could only get in there!"

Flius, repressing his own emotions, answered quietly, "The problem is how we can go about our work of rescue. If Irmfried can succeed in getting some blue garments through, she can get Judith and Urania away to some place where we can meet them. But what will we do then?"

Vern answered decisively, "Nothing, without Cassaniak's help! If we can get him in with us, we can accomplish a good deal. But how far is it from the Holy Place to the space-ship docks? And as soon as ever you cross a certain zone, you will run into the human police the Drusonians keep."

"How many human police are there?"

"They travel in pairs."

"We can take care of that many," said Flius.

I myself had no coherent ideas at the moment; I was too much upset and disturbed to think clearly. But as I turned away toward the window to compose myself, I saw a kind of carriage down below, a basket-like vehicle pulled along the road by a man.

"How much does that thing weigh? How much power does it take to pull it?" I demanded.

Vern, astonished at my tone of command, replied, "Ah, a transport wagon. They are very light and can carry a good deal of weight, as they are made of woven fern-fronds which are rendered extremely light and strong by a binding of metal that we don't use on the earth."

"Listen," said I, "we haven't heard anything from Hurst, but we must begin to act. One of these wagons, painted blue, and provided with a power motor and air propeller, ought to be able to cover a good deal of distance in a short time."

"We need Cassaniak!" insisted Vern. "Without his help, we can do nothing. He is an engineer."

"No," said Flius. "We're losing time."

"Cassaniak," explained Vern, "can get all kinds of things we need." And he hurried out, while we turned the televisor on the park of the Holy Place again, and this time we had a piece of luck. With heavy steps that bespoke her weariness from a day of hard slavery, Judith, with the other woman, was coming through the park and entering the building there. Urania ran to her and flung her arms about her. She took the child into a room in the uppermost story of this giant animal-house, took her on her lap and rocked her, trembling and weeping. Then she put her down, searched around in a dark corner at the rear and put the radiophone to her ear, not as though she really expected to hear anything through it, but more as though to remind herself of something lost forever.

Irmfried spoke first and quickly. "Be patient," she said. "We're here," and rapidly handed me the apparatus.

"Alf is with you," I said. "We are coming and we'll get you out of there."

Judith spoke. "Give me two hours to rest in; no, three. Wake me up then. I can't do anything now; I'm all tired out."

We looked at each other, not understanding, but we obeyed.

I still do not quite understand how I managed to master my own feelings during that time. But I was interrupted when Vern came back with the announcement, "A caravan is going to the Great Holy Place at the twelfth change of light and dark. The captain of the canal boat that will take it is an Atlantean. Irmfried will be the last one to get into the boat, so she will have time to get rid of the outer clothes she is wearing and escape the vigilance of the beetle-watchmen in her blue."

"And the boatman won't give her away?"

"I should say not. He thinks only of revenge. He is one of those whose tongue has been cut out."

We went to work with feverish energy. In a few hours, we had to make a complete plan of the Drusonian city, noting the localities where Judith and the child were and where the watchers were placed. Irmfried would have to learn the whole thing by heart before she dared venture forth.

Three hours later, I woke Judith. She whispered, "I'm so glad. I had just about given up hope and was going to take my own and the child's life. The others explained to me that it was one of the highest of honors to be able to stroke the abdomen of the wife of the chief Man-Shepherd. I thought it would be easy, merely to massage her for a couple of hours with the help of another woman. But it seems that the Drusonians suck strength from us through this massage in some way. They draw out every bit of bodily electricity in one, and when I get home after one of these periods, I am ready to drop. If the baby were not beside me, I doubt whether I would have wakened even then. She isn't very well, either. I have noticed

that, in spite of all the care they give her, she has become thinner, and it's the same with all the other children here."

I informed her of the plans we had under way. Irmfried would sneak in soon and she would stay close by Urania.

"Good," she said, "only come soon." She had been so suddenly roused from utter hopelessness to the possibility of escape that she did not even ask how we had gotten there, only about how she would be able to escape.

● On this afternoon, we made another discovery that helped to lighten our hearts. We saw one of the canal boats travel speedily down the lane of water to a gate of the Holy Place. Goods and people were rapidly unloaded. The watchers were not human, only two of the police-beetles, who touched each person and bale of goods with their antennæ. When the gate had been closed behind him, the canal boatman took off his clothes, plunged into the water, and had a swim. This gave us the certainty that the water would present no real obstacle; it was neither poisonous nor acid, in spite of its curious coloring, but water in all respects like that on earth. The apparatus Hurst had provided us with would be a protection against the electrical barriers of the place, and we did not think it would be difficult to get through the forest of spikes.

We worked rapidly, testing the instruments, going over everything, and were busily applying coats of blue to one another's faces and hands when the door opened and in came Vern, accompanied by a big, gray-eyed man. It was Cassaniak.

He was a huge, hearty, strong person, whose very presence inspired confidence. Flius told him shortly of how matters stood. He showed Cassaniak our passports from Liuwenhord and called Irmfried from her corner to be introduced.

"Irmfried!" said Cassaniak, "so you came here to see me, since I couldn't come to visit you." His voice was gentle, like a child's. "I promised to marry you when I got back from Cape Town. Did you come to remind me of it?"

"No! We only want to rescue Judith."

Cassaniak began to ask questions; Flius answered, sharply and coldly, and I perceived that he did not in the least like the fact that Cassaniak's eyes never left Irmfried.

"And how are you going to use one of those wagons?" he asked.

I explained that one of our machines would drive a propeller, and he understood without further explanations. He wanted to see the machine, and I set it going for him.

"Stop it," he said. "That will make vibrations they might be able to trace here. But I know a place where you can work in safety."

We showed him the televisor. He was as delighted as only a technical man can be with a new technical marvel. While he looked on, we turned it hither and thither, showing him different places on Druso.

"These particular pagodas here connect up the streams of electrical energy between the three Holy Places," he finally explained. "It has long been my plan to disable them, but it hasn't been possible for me to carry it out, because they have kept after me so hard, it's difficult to do any more than stay alive."

Flius produced a tiny piece of one of the new iridium explosives. "This is plenty to blow up a whole pagoda."

"Good!" said he. "One of my people will take care of it. He is a good man, a regular professional burglar. He will get into the place somehow and we will watch him. Once this pagoda is gone, all the electrical power on the planet will go off for the moment. They will need time to set things in order again, too. Moreover, the Drusonians will be thrown altogether off the track and will look in every direction but this one."

Thereupon we drew for him the plan of the Holy City as far as we had investigated it.

"I know all that," he said, waving the map away. "In that neighborhood are the Blue Mountains. The Drusonians will make a heavy attack there, under the impression that I and my people have broken

out from there once more and stirred things up. But we have long since been hidden in another place, along the edge of the Stiria Canyon. The earth is blue there, too, but the blue strata only begin about forty feet below the ground level in the side of the canyon. We will all get back into it. No matter how clever they are, they won't find where the attack on their pagoda came from. Fortunately, they don't know how to make these televisors."

Flius called me to one side and showed me the neighborhood of the Blue Mountains on the screen.

"Doesn't this formation," he asked, "remind you of the neighborhood where the explosion took place around Karaga? I wonder if this alteration in the ground wasn't caused by an atomic-destruction explosion like that one back on Earth? It must have been terrific, and perhaps it was even the push that threw Druso out of its previous orbit and made it a wanderer."

Cassaniak came over to us. "Let me look at the Holy Place. I will have to know all about it for my attack. I need all the details."

We turned the televisor to its largest scale, showing us the Holy City as on a great map.

Cassaniak peered at it, made a note, and remarked, "I have investigated the whole planet. The Drusonians were once upon a time a great and highly talented race. The remains of their best period are the police-beetles, but they haven't much intelligence. The people who do the thinking are mollusk-like, and their females are not even clever enough to care for their own larvæ. They have become so degenerate in this respect that they need women to nurse them. They need human milk; they need the warmth of human women; they need the strength of our young men. I want to set the prisoners free, and I want to know what happens to the young men and women who vanish in the bloom of their strength, when they are twenty-eight to thirty years old. We need not be afraid of their electrical barrier if the pagoda is once destroyed, at least for a time. Then I can get in and change a few things in there."

We turned the mechanism to the greatest possible magnification, and when the picture on the screen changed it showed us the dwellings of these insects.

"All that has no great interest for me; I want to see the places where the humans live," he said.

Into the circle of our vision swept a long line of factory-like buildings, with systems of conveyors connecting one room with another. At either end of this factory building was visible a temple-like tower with terraces beneath it, and on one of them we saw the closing of a festival of men. They were eating and drinking gaily, and their hair was bedecked with flowers. Priests were going around the tables, placing on the head of each guest a kind of wickerwork that seemed to be made of silken threads, fastening them under their chins. Ivy-like leaves were woven through this, gaily decorating the feasters.

At the end of the terrace was a doorway with torches blazing beside it. Like the chorus of an old Bacchic dance, the feasters were prancing through this doorway, throwing aside their clothes.

Flius altered the direction of the televisor and we looked down upon a similar festival of women at the tower and terrace at the other end of the building. Here, as among the men, their heads were decorated, their clothes were thrown aside, and headed by a priestess, the Bacchic procession entered the building.

● We turned the field back on the men. There we discovered that the door conducted them into a narrow passageway. Amid songs and music, the priests were calling to them, "To you happy ones will now be revealed what joys and wonders the gods have reserved for you." We watched while the priest entered the door, the others following in single file.

Behind each, a little moving partition leaped out from the wall to isolate him in a little compartment which moved with him down the passageway for a distance, then vanished as it had come. We noted

that the priest turned to the right through a special door and went up a flight of stairs, while the feasters, each with one arm upraised, went straight on. A queer whirling movement seemed to take possession of them as they marched. But an alteration of the angle of the televisor showed us what was really happening. Each man, with arms upraised, was sliding down a steep incline, and as he slid, a sharp blade licked out from the wall and pierced him to the heart while his upraised arm was caught in a pair of bars. Into his hair and the network the priests had placed around his head sank a pair of grippers. Another pair of bars seized the still-quivering body beneath the armpits. Between his legs slid a three-cornered block, spread them apart, and the body, thus arranged, slid through another door into a long room. A metal clamp gripped it by the rump, and in a moment, automatic knives had deprived the sacrifice of head, feet, and hands. This part of the process was watched and regulated by one of the ant-like Drusonians, who controlled it through levers and with the aid of a system of reflectors for observation. The head, still gripped fast, moved along in another direction; feet and hands fell into a chute and through the floor into some other place. The rest of the body, with arms and legs spread, moved along on its block and into a system of sliding knives. The legs were slit up, cuts were made in the body, hooks reached into it, weights were attached, and in the shortest possible time, muscles and fat were detached from the skin, which was picked up by another conveyor and carried farther along. Arms and thighs were cut loose, a great knife slicing the rump one way, then the other, sent it along, cut in four pieces.

Up to this point, the whole process had been in charge of the ant-like Drusonians. Now the pieces entered another room, and here we saw men at work.

"They are blind!" cried Vern, and pointed out to us one of the laborers, an Atlantean who had been ordered blinded by the Oracle for disobedience.

Without knowing what they were doing, these unhappy men were cutting kidneys, liver, and glands from the bodies. In the next room, the heads were being handled by machines that removed the upper half and emptied the brains into a tube that led to a huge vat.

All the glands and organs were handled by the blind, and within a few moments, the feasting men had become a means of enjoyment for the Drusonians.

And on the women's side of the building, when we turned the televisor that way, the same process was going forward. All the tough pieces of the bodies were cut into small bits by automatic machinery, from which they were conducted into retorts where water was added and something like the earthly beef-tea made of them. All the large pieces of flesh, the upper arms, the thighs, etc., were conducted into a refrigeration chamber. Later we learned that these portions, which were not used by the Drusonians, were kept there to be brought forth and served as meats at the next feast of the gods which ended in this fashion.

Everything that had belonged to these sacrifices was made use of by their masters, their faith, their knowledge, their labor, their warmth, their bodily electricity, their milk, flesh, hair, skin, glands, and internal organs, and finally, their flesh. The process was exhaustive. Children of the first machine ages, they tell us, were used by their fellow men nearly as heartlessly, except that the heartless men of those days were not quite equal to making use of the faith and knowledge of the children of the poor.

"I'll never leave a bug alive again!" Cassaniak ground out, white of face as the screen before us continued to show the details of the man-meat factory.

He paced back and forth. "They want to make an attack on my people in the Blue Mountains from the other Holy Places, but I'll fix them. They don't know how to find where we are. And when they are through, we will come out again and never rest till they are all gone, all!"

"Don't forget," said Irmfried, "we

must rescue Judith and take her back to the earth. Won't you come with us?"

"My duty is to kill Drusonians! Only when they are all dead will the earth be through with them."

"The earth will be set free through its own efforts," said Irmfried impressively. "When we get back, Hurst and my father will destroy the Cape Town station and Druso will swing off into space again."

"And the people here?" asked Cassaniak. "Shall they continue to suffer? I'm staying! The earth will never be free and the race of men will be ashamed of itself until every Drusonian is dead."

Once more he paced back and forth, and the frightful pictures on the screen lent point to his anger. Finally he turned. "When everything has quieted down after the first attack, I'll get you to a spaceship. As an old captain, I know how to handle them and how to set them in motion. I need only to get into the harbor at the last minute with a dozen or so of my Blues, who will show you what to do. Norn will cut the contact and the ship will leap out into space. You will be saved. But my object is not yours."

Irmfried wanted to say something to him, but Cassaniak lifted his hands. "We have had enough of discussion. Let's do things." And he went out, altogether the fighter.

Once more I felt as though there were earth under my feet. Here was a man I could understand. How splendid he was, meeting attack with counter-attack, and revenging the shamed race of man on the whole race of Druso.

As he went out, Flius said thoughtfully, "It's a good thing that the cattle on earth don't think of us as Cassaniak does of the Drusonians."

CHAPTER XXI

Rescuing Judith

● The distance from the landing city to the Holy Place was measured out—123 kilometers. The wagon we had secured, and which had been equipped with an air-propeller drive, could not be taken out as yet. It would serve us for the flight to the canyon, when we could drive it down one of the glass-hard roads through the red plains, protected from the cruising guard-beetles overhead by our camouflage. As for humans, there were none in that locality and we could also count on the destruction of the pagoda and the upset the sudden shutting off of electrical power would cause. The other parts of the plan were now also worked out and the whole fitted smoothly together. Irmfried would take the place of the other girl, and as it happened, the captain of the canal boat she was to travel in was one of the discontented, a Blue at heart. He would keep the last place in the boat for Irmfried, so that she could slip through the water-gate of the Holy Place. As for Flius and I, an agreement had been made with the other boatman, the tongueless Atlantean, to carry us to the walls of the Holy City.

Vern explained to us that the fate of this man was not an uncommon one; like others on Druso, he had run away from his duty to the gods. When such men were caught, they were given particularly heavy punishments. The Drusonians were not unwilling that a few should try to escape in this manner from time to time; it gave them an excuse for putting men at the necessary heavy tasks without breaking their promises of an easy and comfortable life to the majority.

Irmfried bade us farewell gallantly and with head high. We watched her with the televisor, seeing how easily she slipped into the appointed place in the narrow cabin of the boat, and could follow it as it raced along the canal. The boat halted at the water-gate where a steep ramp reached down to it instead of steps. Two red-leaved trees stood at the right and left of the low narrow door leading onto this ramp, and in each of them was one of the guard-beetles.

The human sacrifices entered the doorway, one after another, in a long line. Finally Irmfried appeared. She was like a being out of a fairy tale, all in blue clothes, with her blue-dyed face. She

moved slowly up the ramp with her eyes closed so that the blue lids would hide her eyes which would give her away. Soundlessly she moved along on rubber soles, holding back a little till the others had gone through. She had not spoken a word, and the rest were too much overcome by their own reverence for the Holy Place and excitement over the joys that awaited them to pay any attention to her. As she got inside, it was comical to see the girl stand perfectly still in a fright when she met the first Drusonian, which happened to be one of the ant-like creatures. The animal sniffed; it seemed to smell something, but to be uncertain of the odor. But Irmfried stepped quickly past it, and now she could be sure of the advantage of her own invisibility. After that, her manner became more assured. She knew that, at this hour, there were no humans outside the buildings. She went forward bodily, and from the distance, we let Judith know that she was on the way. The latter went down, opened the door, and handed Irmfried a garment and the two went quietly back up to Judith's room. Urania was asleep; Judith and Irmfried discussed what they had to do hastily and in low voices; the latter obviously could not remain long in Judith's room for fear of discovery. Hurst had provided us with a supply of the perfect beryllium alloy wire that is almost unbreakable. By looping pieces of cloth into it, Irmfried and Judith now made this into a kind of rope by which the girl lowered herself from the room again to wait in the grounds. Judith unfortunately would have to remain in her hard service for several hours yet, but there was no way to spare her this torture. I could understand her feelings as she pressed the girl to her breast, bidding her farewell.

Cassaniak was already on the way to prepare his people for the attack on the pagoda. Flius and I took our places as passengers of the dumb boatman. That was a queer journey; we lay at the bottom of the flat boat with all kinds of goods piled around and half over us. Once one of the flying beetles swept down to inspect the craft and we lay still under protection of our blue coloring, but both of us gripped our liquid pistols harder, and if that beetle had come a little lower, he would have remained in the canal for good. But he swept up and off again, unsuspicious. At the second pagoda before reaching the Holy City, our boatman steered us in to land. In answer to our thanks, he nodded us a farewell, reaching up to lift the lobe of his ear and show the blue spot of an Atlantean.

The river-edge was bordered with orange-colored reeds, behind which rose a tangle of tall red fern-bushes. In the shadow of this undergrowth, we worked our way along to the road. Here the human watchmen of the Drusonians were standing about carelessly, talking about something or other. Carefully we crept past them and to the edge of the forest of spikes that marked the beginning of the electrical fence. Flius and I had picked up a couple of the odd red lizards of Druso on the way; as we tossed them into the electrical field, they were reduced to cinders in a single flash. Now we put on our protective network, tested the voltage of the protective barrier, and as Hurst had directed us, sent six thousand volts through our protective networks. The basic idea of the apparatus was that of the old Tesla law, that a man can stand six thousand volts if he grounds nine hundred, and we were thus protected against the field of electricity around us by the current passing through our own network. A moment of test showed that it would be all right.

I stepped forward, determined that the protection was sufficient, and together we worked our way through the spikes toward the water, while the metallic rings of our protective armor gave off a shower of sparks, so that we seemed to one another to be walking through torrents of cold fire. Where the spikes left off, I dropped another lizard to the ground; he raced away into the grass, unharmed. Flius went back. I lay down, spoke into the radiophone, and got an answer from Irmfried. She informed me that every-

thing had been arranged for the escape; a path through the park had been chosen which would take the three from the Holy Place to the edge of the lake that surrounded it in the shortest possible time. I worked my way along to the point under the walls where they would emerge and waited. A few moments later, Flius found me there. He had been in communication with Cassaniak's people and everything was prepared on their side. The sign for us was to be the moment when the great red light that hung over the center of the Holy Place should be extinguished. It would occur in about the third hour of the next darkness. Until that moment, there was nothing to do but wait and endure.

● With our portable televisors, we watched Judith as she performed her usual duties. My heart went out to her as I saw how exhausted she was after the daily massage of the female Drusonian. But at least, this had the slight advantage that she went to sleep immediately afterward and worried about nothing for the next two hours. Irmfried nearly ran into trouble. She met a woman bowed over one of the larvae who sprang aside in fright at the sight of her. As had been planned, the girl leaped upon her and sprayed her face with a numbing drug, but if that happened once or twice more, the alarm would be given and a search for Irmfried in the park was sure to follow. We watched how Irmfried crept in, woke Judith and the child, and wrapped them in the thin blue cloth and lowered them from the building, not daring to lead them down through the corridors. When Irmfried reached the bottom, she jerked to bring loose her wire-rope; it did not give at the first tug and she had to pull harder with a noise that woke some of the others in the building. A few heads came out to see what was going on, but they perceived nothing and all fell quiet again. Both women missed the path, and it was a good thing that they had their radiophones fixed to their ears, for we cried to them, "Left! To the left, there by the big tree, then straight ahead."

Remarkable as it seems, we led them through the garden, led them from afar where we lay hidden in the purple Drusonian night. I would have preferred to dive into the water myself and swim under the water-gate to meet them, but Flius held me back. Finally we saw the bushes on the farther bank move, and the two masked women slip like shadows carefully into the water and begin their swim.

Irmfried was carrying little Urania, and I could hear her say, "Don't cry, dear, I'm taking you to your papa." Then they dived, and a moment later Judith was in my arms and the baby in hers, and I was not in the least astonished to see Flius kissing Irmfried.

Urania said, "You're a bad papa to leave us all alone for so long." Then, for a moment, the purple light seemed to grow darker around us. We looked up. The great red light over the Holy City burned to a cinder, then went out altogether. I tossed a lizard into the electrical field; it moved about rapidly, with quick, certain steps.

"Quick!" I cried, "before they turn it on again!"

And we raced across the place, perhaps two hundred yards wide, I with my heart beating fast and perspiration streaming down my face. Judith, Urania, and Irmfried had no protective networks —if the current came back before we got through, they would be cinders on the ground at our feet.

"Come, come!" I cried, dragging mother and child along. Judith said, with a gasping laugh, "We'll make it faster if you don't hang on so," and I noticed that Flius, a prey of the same anxiety that gripped me, was also pulling Irmfried along by the arm.

As we reached the end of the spear points, we all dropped to the ground exhausted by effort and excitement.

Irmfried was the first to regain her composure. "Where to now?" she asked.

I was still at fault. Flius produced a

map and examined it with a quick flash of his pocket lamp. "To the right."

And we took our way to the right through the brownish-red tangle of vegetation while our good star, the old earth, shone in the heavens above us, huge and purple, as though calling us home. We could just make out the outlines of New Zealand and Antarctica.

A figure suddenly leaped out of the ground in our path. I gripped my weapon. "Cassaniak!" called Irmfried.

It was Cassaniak. "This way," he said. He had been waiting for us under a fern-bush beside one of the roads which ran from the Holy Place. Two of the Blues led us to the wickerwork wagon and Cassaniak showed us the simple friction-gear that controlled the thing.

"Like the old automobiles of before your time," he told us, "it will cover about fifteen miles an hour, but I doubt whether the frame will stand any greater speed."

We climbed in. Flius took over the steering controls. They were composed of a lever with a couple of ball-grips by whose movement the forward part of the vehicle was turned to one side or the other. I turned on the little motor; the propeller began to whirl and the wagon moved along silently. One of the Blues who accompanied us was an Atlantean, the other a Norwegian. They were very silent, and when we asked them the reason, they answered, "We're downhearted because we haven't been able to kill any Drusonians."

CHAPTER XXII

Back to Earth

We reached the entrance of the canyon just as the curious Drusonian dawn began to break. On the earth we could see the West Coast of South America turned toward us. The deep sides of the ravine surrounded us, making a dark that we had to illuminate with our electric lamps. In this valley, where a boiling stream of water bubbled at our side with a racket that made conversation impossible, the wagon picked its way slowly over loose stones and débris. Suddenly, the Norwegian made a movement. We stopped and dismounted while the wagon was shoved into a tunnel in the rocks and stones piled before it. The rest of the trip would be made afoot.

"Papa," asked little Urania, "are we going home?"

"Yes," said Judith, "we're going home. We're on the way there now."

"Oh," sighed the child, disappointed, "I hoped we were there already."

At one side, a passage led into a cave and we heard the dripping of water. The sides of the place were all blue stone. In the glimmer of the lamps, we seemed to be entering some enchanted grotto. Finally we reached the bottom of the valley. Above us there was only a small ribbon of sky to be seen, and we were suddenly surrounded by people who led us deeper into the caves. Here were women, some of them with quite young children, and a few of the Blue warriors were standing before a fire. For the first time, I noticed that the tropical heat of the outside had given way to a decided chill. The leaping fire threw great shadows along the wall. In the same way, the men of prehistoric days must have warmed themselves at fires in subterranean caves in the intervals between hunting the cave-bear and the aurochs.

The baby was already asleep. We wrapped her in blankets they handed to us and laid her down to rest. In her state of weariness, sleep was the best thing in the world for her. We four, however, Judith, Flius, Irmfried, and myself, were tired and yet unable to sleep, exhausted and nervous. A woman brought us a dish of fish soup and some cooked vegetables. As we ate, we realized for the first time that all of us were furiously hungry.

The woman sat down beside us and asked Judith, "Did you get out of the Holy City? I escaped from there, too, but in a different way. My child died. All the children whose mothers have to massage the female Drusonians die soon-

er or later. Those devils exhaust our strength and that of the children through us. I jumped into the water, because I didn't want to live any more. One of the boats came past and I laid hold of it, without knowing why. It pulled me for a distance; when I crawl up on the bank, one of the Blues found me."

Judith gripped the sleeping child closer. "And to think," she said, "I would have killed my darling, only because I liked to have her warmth near me when I was so tired."

Urania made a little movement in her sleep, opened her eyes, and put her arms around her mother's neck, then drifted off again.

A few moments later all of us were sound asleep.

We were wakened by the sound of happy voices. Cassaniak had returned. He had taken out sixty men and only two had been lost. The attack was a success. They had knocked over several Drusonians with their crude weapons, rescued and brought with them twenty women. They had surprised a Drusonian banquet and brought with them a sample of the beverage the Drusonians were enjoying. It was fermented human milk.

Cassaniak had reckoned accurately on the amount of time it would take for the Drusonians to get things going again after the blowing up of the pagoda. For two whole hours, there had been confusion and tumult around the Holy City. "Now," he said, "the flying beetles have gone off to the Blue Mountains. We heard them digging up the whole place with their bombs and explosives and have turned all the electrical power of the other two Holy Places on them. Meanwhile, I would like you to notice that we are perfectly comfortable here."

Among the women was one old one, almost the only old woman I had seen on Druso. She seemed dumb and frightened, trembling at a sound, but after she had slept, began to tell us about herself. She had been employed at preparing food for the Drusonians, bouillons and meat jellies. She did not know what kind of meat was used, but thought it might be pork.

We used the televisors to keep the Drusonians under observation. They had brought out an immense number of human laborers and were working feverishly at the task of surrounding the entire district of the Blue Mountains with an electrical barrier.

Cassaniak laughed. "They don't know that neighborhood! There are underground tunnels and caves going into it. I haven't finished with the Drusonians yet; they are not so clever, after all. All they can do is think slowly; oh yes, a few of them can fly."

And now we turned to the last and most difficult step in the business of escape: the capture of a space-ship.

Cassaniak had worked out a plan for that. "We will go into the city singly, sixty of my people and I myself with them," he said. "When you get into the ship, lock all the doors. I know how the machinery works and I'll shoot you off; then the ship has nothing to do but fly. You can render the Oracle harmless by breaking the crystal and pouring a little acid on the jellyfish inside. The least bit is enough to kill it."

Flius objected, "But we need to send messages to the earth somehow, so that we won't fall into the hands of the watchers at Cape Town."

"We'll let Liuwenhord know in the usual way," declared Cassaniak. "We shove a note into one of the packages of goods at a predetermined place. The Atlanteans will find it at the unloading. I think it would be best for you to go on the ship that Norn commands. He's an Atlantean, and in case of necessity, could start the ship off without outside help. Meanwhile, I and my people will make such an uproar in the city that nobody will pay any attention to you. The Drusonians will be kept thoroughly busy."

"But don't your people want to go back to the earth with us?"

"That point has already been decided. We are staying."

All these conversations and alterations of plan woke in me a feeling of uncertainty. The Drusonians of the city were, in fact, less to be feared than the men there. I confided my doubts to Judith who, since her rescue, had sunk into a kind of lethargy, the result of overexertion. She longed to see the bright white sun of the earth once more. The eternal red light here was painful to her, and the baby too was not well under it. The exhaustion of her mother had exhausted her in turn.

Irmfried came mournfully to ask advice. "What shall I do? Cassaniak has asked me whether I meant it when I told him to come back and marry me. Why, I was only a child then. He left me, without waiting for an answer, but will return. And I'm in love with Flius."

● This was a new difficulty. Without Cassaniak's help, we could accomplish nothing.

Judith undertook the task of talking to the warrior. I don't know what she said to him, but she succeeded in smoothing him out somehow.

"What did you say to him?" I asked her later.

"Oh, I told Cassaniak that Irmfried was waiting under father's orders, and that he had commanded her to do everything to save me. If that was only attainable through giving herself to him, then she was willing. That seemed to strike him and he went out to talk to some of his Blues."

Cassaniak returned shortly after. "I have decided that I am going to stay," he declared, "and alone." He glanced at Irmfried and Flius. "There would be nothing for me to do on the earth anymore. I need something to fight. I have spoken with my people and questioned them as to how many of them want to go back to the earth and how many wish to remain here with me and fight the Drusonians. Everyone said 'We will stay here and fight.' But you will need some on the ship, so I had them draw lots for it, with the provision that if anyone who drew a lot to go could find an exchange, he could remain. So we finally got thirteen to accompany you. You know," he explained, "you will be lost indeed if everyone aboard the ship is not an Atlantean, and you will need these thirteen to help you hunt out and dispose of any priests you may find there."

Vern sent along the news to Liuwenhord as planned, but meanwhile we had to remain in the caves till the space-ship commanded by Norn returned from the earth. That meant four long weeks of earthly time down there in the depths of this foreign planet, but they were not altogether useless, as Judith and little Urania recovered some of their strength. Flius had bethought himself to attach to them the same apparatus Hurst had prepared for our use during the journey from the earth to Druso, and this treatment reestablished somewhat the electrico-biochemical reactions for both of them. All of us had by now become more acclimated to the climatic and gravitational conditions of Druso and we emerged from the protective canyon full of hope. Once more we took our way to the canal, and the same tongueless boatman who had assisted our previous venture picked us up.

Once more we were back in Vern's apartment at the edge of the landing city, waiting for the space-ship. The coppery lightnings flashed from the sky; the ship landed in its cloud of steam and the stevedores began their work of unloading it. We watched the train of sacrifices leaving the ship; new cattle for the Drusonians.

News from Liuwenhord came through, brought by an Atlantean who had been smuggled into the human cargo in the guise of a Mediterranean.

Liuwenhord would be on the spot when the space-ship landed, with two of the largest submarines and a heavy crew, who would make an armed attack on the harbor as soon as it was certain that we had the space-ship in our power. As an indication of success, we were to hang out a blue flag, storm all the secret places of

the ship, and kill or imprison all Drusonians and priests we found. They would have plenty of weapons on the submarines. Once we got outside, we were to go on board the submarines at once and dive as deep as possible. Everything was prepared for the great effort. Hurst would be overhead in an airplane and the police-beetles would be attacked by other airplanes, colored blue for invisibility. We were to be brave.

Cassaniak was jubilant. "That will be a day! I would like to see mankind at last win a victory over these bugs!" he exclaimed. "Everything will be confusion here, too. We have more people on our side in the landing city than the Drusonians imagine."

We gave Cassaniak all the explosives that remained to us, and he worked out a complete plan for the destruction of the most vital points in Druso as soon as our space-ship had left. "If I can once smash up their electrical power-plants," he declared, "I'm not afraid of the simple form of warfare with the police-beetles."

He went over all the rest of our equipment and we left him everything that was not absolutely necessary for out return journey. We were provided with liquid-pistols and heavy hammers like the maces of the Middle Ages, made from a metal heavier than any I have seen on the earth, the same material, in fact, of which the metal shoes were composed. They would smash through the chitin armor of the fighting beetles as though it were glass.

And so the day which was so important in the history of the human race came at last. We were led into an empty hall, at one end of which was a half-opened door. The last packages were being loaded onto the space-ship; Norn's head showed at the door and he reached an arm out to beckon us. We leaped out, stormed through the small group of man-watchers in a compact mass, and armored in blue, dashed through the opening. Two of the blues were pulling Judith along, I myself Urania. Irmfried was at Flius' side.

Norn slammed the door into position behind us. A few of the crew, devoted to the Drusonians, came toward us, yanking out weapons, but it was hardly a struggle; they were shot or hammered down without damage. Norn leaped to the starting levers; Vern and a gang of the Blues dashed through the passages for the crystal cylinder. We reeled, as the interior structure of the great ship changed in response to the impulses it was receiving. Vern recovered himself to hurl his heavy hammer into the side of the crystal, and we shot into the jelly-like mollusk that flowed forth, but it was Irmfried who dashed a vial of vitriol into its midst.

We had a cramping sensation, and in that moment knew that we had started. Our electrical protective devices—thanks be to Hurst!—kept us upright, while all the others sank into dumb senselessness at our feet. We climbed into the crew compartment. Everyone there who had not the blue mark of Atlantis under his ear was bound and tied to his bunk. Our own people we made as comfortable as possible in the beds, not an easy task in the rocking space-ship where the pressure made every motion like swimming under water in opposition to a strong undertow. It was some several hours before we had completed enough of the tasks to go back to Norn's cabin. We found him resting with a lever between his fingers. His bunk was so cleverly surrounded with electric counterpoises that, while all the rest of the crew were reduced to unconsciousness, he remained awake, if not fully active. Near his head was a row of buttons for communicating to him the commands of the Drusonians. But as an experienced captain of the interplanetary run, he knew without orders when the limit of the "out" stream of force from Druso was reached, and the ship was taken over by the "in" stream from Cape Town. At this moment, certain switches had to be thrown in the ship so that it received the indrawing stream of force. We remained in the cabin's slinging hammocks to which we retired for a rest while we wondered what was going on in the landing city of Druso.

CHAPTER XXIII

Defeat and Revenge

"How strange those red fields on Druso were!" exclaimed Judith. "It seems to me now like some mad dream within a dream."

Irmfried sighed. "How short a time it is since we left the earth, and yet those few weeks on Druso seem to have lasted for centuries."

Flius was making a calculation and showing her the details of some of his complex chemical and mathematical formulae.

Judith began to tell what had happened to her during her stay on Druso. Even while she was at Cape Town, she had still hoped for a rescue. She had even dared to jump into the water with the baby there, but more than a dozen men had leaped after her to save the holy sacrifice to the gods. Her only comfort was that we could at least see her, but it was often impossible for her to speak to us. That was one of the hardest things to bear. And when she was finally taken into the space-ship, everything seemed definitely and finally lost. The reception she met with when she got off the space-ship gave her confidence another blow. It was so much like a city on the earth. At first she had recovered some of her composure from the mere discovery of how much more physical strength and energy she had than on earth, but this strength vanished rapidly in the Holy Place. She could not express the horrible nausea that had gripped her when she had to massage that giant insect every day. In some of the rooms lay clumps of insect eggs, filling the whole building with a curious and unpleasant odor. Certain of the women, whose children had died, were set aside to give their milk, and they were kept in a little grove on a special island in the lake. The Drusonians had even developed milking machines to draw the fluid from their breasts and fed them on a special food that increased the quantity and prolonged the milk-giving period. Otherwise these milk-givers were very comfortable. Most of them, having little exercise, had become quite fat; they were kept very clean and three times a day had to give their milk. Some of the Drusonians did not wait for the machines, but had the women brought to them and took the milk directly from their breasts. That hurt, and most of the women did not like that form of service. But it never lasted long, for the Drusonian sense of taste was extremely fine, it appeared. They classified women according to the length of time they had been giving milk, and also according to race. Every woman was stamped on the back with a sign in indelible ink that indicated her age and race, and she was kept with others of her own kind. It was a completely scientific and carefully regulated system. The Drusonians began with an injection which would protect them from infection with certain earthly bacteria and then passed them through the various stages, all this work being in the hands of the ant-like Drusonians.

The hardest thing for Judith to bear had been the constant feeling of losing her strength. When her work was done, she found herself so exhausted as to be ready to fall asleep at once. For fourteen earthly days, she had been a creature of the Drusonians at this hard service, and even yet, when she dreamed of it in her sleep, she would wake with a cry.

Judith, tired with the tale of her own sorrows, closed her eyes and let her head sink back.

I noticed suddenly that little drops of perspiration stood on Flius' forehead as he worked over his formulae, and that he was no longer chattering with Irmfried as he bent over the papers. I went over to him and watched over his shoulder. The formulae he had written down surprised me. I laid one hand on his shoulder. He looked up at me with agonized eyes, then turned to Norn. "Is the ship running all right?" he asked.

Norn nodded with the quiet confidence of a sailor of space. "Everything is all right."

Flius spoke to me in an undertone. "Do you think they've got enough power to

do it? Do you think they'll get things in order in time to do it? If we have to go back to Druso—"

I felt that my mouth was dry. I croaked out somehow, "But Hurst says that one of these space-ships can't be halted during its journey."

"I thought the same, but that was before we got on one. Look—they can do it with perfect ease, if this formula is correct." Once more he bent over the table, making his calculations.

A wave of anxiety swept over me. "How long will it be before we come into the influence of the pulling stream from the earth?" I asked Norn.

He glanced at the celestial chronometer. "About seventy earth minutes. The counterweight change on the stream will come then."

Flius whispered behind his hand, "Perhaps that is the only thing that can save us," and as he went on with his work, he glanced over and again at the chronometer over Norn's bunk.

Irmfried had not missed what was going on. "What's the matter?" she questioned.

"Oh," said Flius, "we're checking the speed of the ship. The first time we were so much upset over the adventure that we could—" he broke off suddenly as a bell rang clearly from one of the machines on the cabin wall.

Norn worked himself to a sitting posture, feeling with his finger the rhythmic vibration of the metal wall which had followed the warning bell and glanced at the red light that began to wink on and off over his head. "What does that mean?" we all three cried together.

"The Drusonians are giving an order. 'Stop the ship,'" explained Norn.

"Can you reply?" I asked.

"Certainly. If I press here, it means 'Order understood and carried out.' If I press here, it means 'Not understood,' and here means 'Impossible to carry out the order.' Very simple."

"And will the ship stop if you answer 'Order understood and carried out'?"

"No," said Norn. "That's something altogether different. If we did that, it might very easily break all our necks, placed as we are at the edge of the attraction zones between Druso and the earth."

I leaped up and pressed rapidly on the button "Order understood and carried out."

"How far are we from the earth stream?" came Flius' voice.

"Eleven minutes."

All three of us—including Irmfried, for she had grasped the meaning of the business at once—sat perfectly still, like animals waiting for the spring of the tiger. All at once we were in the grip of a feeling of weakness, of acute bodily discomfort.

"Out!" cried Flius, so loud that he woke Judith. But Norn, who had by no means understood the full seriousness of the position, said only, "We are feeling the earth's attraction now. Notice how bodies begin to shift a little in that direction."

● Flius closed his eyes, the corner of his mouth twitching. I felt his hand; it was cold as ice. But he said only, "Yes, I think we understand."

"What's that?" cried Norn, suddenly.

"We're running slower." He gripped at a lever, and remarked, "They must think we have turned off the machines, and have sent a reverse stream of force after us. But that won't do us any harm now. We're working on earth-power." He glanced at the apparatus. "Everything in order."

But we remained tense. We knew too much of the resources of Drusonian science. What would they try next? What aces had they still up their sleeves?

"Let's get everything ready for our arrival," Irmfried said. "Remember the message Liuwenhord sent us. Every minute by which we can cut the normal six hours before the doors open will be precious, and perhaps the Drusonians on earth know already what's going on in this ship."

We began to prepare the weapons, but

when we came to the question of the crew, there was a halt. Electro-chemical apparatus for so many we simply did not have, and there they lay like logs.

Flius reflected. "Are there any storage batteries or other supplies of reserve electricity on these ships?"

Norn nodded.

Flius went to work at once. "We must try it, at least," he declared. He led electrical connections down, connected up the groups of sleepers. "I'm going to use high frequencies to try to provoke the Bergonier reaction. That will produce a quick working of the muscles."

"We will arrive at the earth in twelve hours," announced Norn impressively.

We watched the clock, and when the twelve hours had been reduced to two, Flius turned on his current. It was obvious that the muscles of the sleepers were being forced into activity in spite of themselves, and Flius declared that another hour would see them awake. We left them under the influence of the current to tend to other things.

A little later we were back, to find them waking, one after another. "We will really see the earth again!" declared our Blues.

But Flius reminded them, "And it's very likely you will have some fighting to do as soon as you get there."

All of us remained nervous and doubtful. We did not know what means of communication with their station on earth the Drusonians possessed, and it was quite within the bounds of possibility that we should meet a most uncomfortable reception. Norn calmed us all down with the quiet fatalism of an old space-traveler.

It was hot; the room was filled with a sibilant hissing. We had entered the stratosphere and went slowly down as we approached the surface of the planet. The automatic coolers began to work; for the first time on the trip we heard the *whir* of machinery. Then there was a terrific shaking—a crash—a tremendous hissing of steam—and the space-ship came to rest, its journey ended.

"We have the advantage of surprise," I said. "The Drusonians won't expect this ship to be opened for six hours more. Blue flag ready there! Everybody got his weapons? Out!"

The door flew open; the blue flag was flung to the breeze. Clear sunlight struck our eyes with almost physical force. Half-blinded though we were, we could see excitement around us over the untimely opening of the space-ship's door. Two of the watcher-beetles swept down toward us with their trains of metal followers. There was a chorus of shots and both crashed into the water.

The few workers who stood on the pier, surprised at the appearance of us beings in blue, hardly made any resistance. In a moment, they were hurled to the ground and overmastered. We leaped into some of the harbor boats. Another of the police-beetles came sweeping down, but again our weapons did their work before he could locate us by either sound or smell. And now as our blue flag became visible to our friends without, we saw swarms of our own airplanes rising around the city. Up out of the water rose the dark tower of a submarine's upper works, just as another of the police-beetles wheeled above us to run into a destructive blaze of fire from our weapons and crash into the water. Over in the city, where the high Oracle of Cape Town stood, a bomb had been dropped with a terrific crash and a cloud of smoke. And one after another, other events followed so fast that we could not watch them. On the steel deck of the submarine Linwenhord emerged to take Irmfried in his arms and kiss her before he saw Judith. He sank to his knees before her, kissing the hem of her garment as he cried, like a herald, "The saving of the world. The Great Mother has brought back her child from the world of terror and death as a symbol of the new life that shall be."

A coppery light glanced across the skies. Where a moment before the space-ship had lain, a great fountain of metallic fragments was rising toward heaven and we felt the rock of an explosion that

cracked the heavy wall of the pier right across.

"Hurst?" I questioned.

"No!" cried one of the submarine sailors. "The second space-ship hit the first one." And as we looked, we congratulated ourselves on our forethought in leaving the ship as soon as we did. The Drusonians had sacrificed the second space-ship to annihilate the robbers who had taken the first.

CHAPTER XXIV

The New Earth

● The submarine's prow was turned toward the sea. A Drusonian ship came after us, skimming across the waves, but we dived and two torpedoes were enough to put it in a sinking condition. We dived; Liuwenhord took the radiophone and cried into it, "Hurst! Go ahead!" Then we saw in the televisors how the whole Table Mountain heaved uneasily as though a Vulcan were stirring beneath it, saw how the whole neighborhood of the bay lifted slowly and crashed together. The Drusonian station was destroyed! Orders went out to the air squadrons to blow up all Oracles.

The tumult of waves around us was terrific. Even in the depths, the tortured masses of water slammed us here and there like a toy. We hurried toward the deepest part of the ocean while a hurricane raged across the earth above. What was happening? We did not know. The whole sea was stirring; Druso was swinging the tides of the earth in enormous floods around the world.

Three hours later we came to the surface of the boiling sea for the first time and tried to get in touch with Boothia Felix. Through the loud-speaker came the voice of the astronomical observer. "Heavy earthquakes. Boothia Felix is safe so far. Preparations have withstood all shocks, though there is some damage to the east wall. Druso connection seems broken. Observation shows planet at greater distance from Earth than before. Distance constantly becoming greater; apparent diameter only two-thirds of what it was. Drusonian space-ship wrecked in Arabia by storm. Submarine Beta announces all well. No word from Hurst."

We steered toward St. Helena. The tidal waves were racing around the earth one after another. Once more the power of the storm forced us to dive. We took in a new bulletin from Boothia Felix. There was fighting all over the world; the priests were proclaiming religious wars against the betrayers of the gods, and each Oracle was rousing the people against the others. Liuwenhord ordered the Atlanteans to gather and go to the places of safety that had long since been prepared for them. There was still no news from Hurst.

A new order went out—all airplanes to look for Hurst. There was news of a big break in the South American coast line. New islands had appeared in the Indian Ocean. Was the ancient continent of Lemuria to be reëstablished?

Flius remarked, "The earth must be shrinking slightly. It is probably still in movement. If Hurst were only here!"

It was a victory, but not a happy one without him to enjoy it.

In Boothia Felix they were holding a great feast, toasting Judith as the savior-goddess who had brought them rescue from the curse of the damned planet Druso.

The astronomical stations announced that Druso was again larger and was approaching the orbit of the moon with increased velocity. With our own eyes, we could see in the night how Druso had grown in size and take note of the planet's altered position. The strain and shaking we had been through in the last hours had wearied us all so that we observed the fact without being able to work out its implications. It was the same feeling of exhaustion that has overcome victors before in the history of the earth and ruined the execution of great plans at the last moment, just when they seem about to succeed. We were all tired; there were ashes over the flame of our will-power. And we were still in the same state when we

reached St. Helena and were able to feel once more the good soil of earth beneath our feet.

The air was tropically oppressive, but to us, who had just come from subtropical Druso, this meant little. We sought out the place where the house in which Napoleon died had once stood. This corner of the earth had long been uninhabited and there was nothing but ruins to be seen. Only the rock from which the great conqueror had once looked out over the ocean remained.

Here I stood alone with Flius. He was pale as he said to me, "Do you know what must be happening up there? The Drusonians are trying to attach their planet to the moon. That can only have one meaning; they know they have lost. The hordes of mankind have revolted against them and the revolt is successful. They have lost their laborers; Cassaniak must have destroyed their electrical power-houses and the Drusonians who control the star are thinking only of revenge."

"Revenge?" I questioned.

"If they succeed in bringing about a collision of their planet with the moon, there will be a celestial catastrophe whose result it is difficult to foresee. But for one thing, there would be a burst of heat that would destroy all life on earth. The old planet will have to begin again with the protoplasm of the seas in its effort to develop intelligent forms of life."

The vision gripped at my heart. On Druso also there was a battle going on! On Druso also was the effort for freedom! And was the result of it to be that we on earth were to perish in a mud bath, in the steam of the boiling oceans? Had we slept like seeds in the earth for three hundred years and wakened to new life only to bring death on this race of men we were trying to set free? The strength seemed to go out of my legs; I sat down weakly.

Irmfried came running out. "Come quickly! Father needs you. Hurst has called!"

"Hurst?"

"Yes, Hurst! He is in Beeny, a hundred miles from Cape Town. He found a little job for himself in the midst of the planetary uproar. There was a small Oracle there. He smashed it up, hypnotized the priest, and is handing out religious revelations of his own, making himself the master of Africa through the mouths of the priests. The faithful are coming to him from all over Africa. He wants half a dozen airplanes to land when he asks for them. He's going to prophesy it to the people. He suggests that now is our chance to find all the Oracles, kill the Drusonians in them, and give out revelations of our own in the name of Atlantis. But what he especially wants is you, Flius."

Even while she was speaking, we had both sprung to our feet. We hurried to the station and in three minutes were looking through the televisor at the conical temple of Beeny. In the center of the crystal tube, posed on a bale of something, sat our Hurst with crossed legs and the old ironic smile distorting his lips. He spotted us in his smaller apparatus, nodded a greeting and asked, "Have you noticed the approach of Druso to the moon?"

"I'm a great deal worried about it," answered Flius, then turned around and said to those present, "Everybody please leave us except Liuwenhord and Irmfried."

● Liuwenhord, a little astonished at the brusque tone of command, nodded to the rest. The Atlanteans who had pressed into the room, happy and delighted, to greet Hurst, turned away, puzzled and talking.

Flius explained shortly what he had said to me. I noticed how Liuwenhord put both hands to his breast and restrained himself from some outburst with an effort. He drew Irmfried to him and kissed her slowly on the forehead.

Hurst nodded. "Yes, it's serious, but we can do a good deal about it. Let all the machines that send power out into space unite their efforts on a point just behind the moon. The astronomers will give the exact bearings. It should be the distance from the moon equal to the distance from

its center to the point where the moon's and earth's gravitational pulls are equal. Thus we will be protecting the moon at the best point with the whole power of the terrestrial magnetism. I can't think of anything else just now, but I hope that this will be force enough to drive Druso off. Be careful to calculate the place correctly. Send the power out when Druso gets nearly to the critical point; it ought to work like a buffer that will send Druso bounding off."

Liuwenhord, his face grey, turned to Flius. He sat down, produced his pencil, and began to draw up formulæ. "Don't forget the Oracle of Beeny in your preöccupation with the moon." And grave as our position was, I could not avoid laughing at this gay and fearless physicist who took life as it came to him.

For four days, we could do nothing but wait and observe, four days during which we wondered whether the end of the earth had come at last. Even Judith noticed it. "Have we two moons?" she asked one night.

"It's Druso, maybe about to vanish," I said.

But she put her hands over her eyes. "Druso will never vanish," she said. "We who have been there will carry a part of it in us forever!"

And then came the wonderful night of the last observation. Flius sat at the televisor and we had our smaller apparatus by us to partake of the observation. Now came the news from Boothia Felix that from the great antennæ there the whole power of the earth was hurrying out into space to protect our satellite from the onset of Druso. We were tense, waiting wordlessly.

Then suddenly from the radiophone came Hurst's voice, "Go to bed, everybody! If nothing has happened to the moon by this time, nothing will, and we can rest in peace and wake to a new day on a young earth."

I doubt if there was a dry eye in the assemblage.

During the next night, we saw behind the growing moon the menacing shape of Druso becoming ever smaller. But Flius, the keenest observer among us, cried, "What's happening to the moon? It doesn't look at all like it used to."

Today we know what happened then. The dragging mass of Druso set the moon in motion, and now everyone on earth knows that the satellite which always presented the same face to us of another age, turns rapidly on its own axis in the space of two and a half hours, and will so turn to the end of time.

Of course you Atlanteans of today all know what followed. Hurst's politico-religious plan was followed out to the letter. We took possession of the Oracles, quieted the turmoil, forbade the feuds and tribal wars, and ended the sacrifices.

Boothia Felix, the last home of mankind, became the source of the new culture. The wild folk of Europe were settled and educated, and France, Germany, Denmark, Scandinavia, and England became the new Atlantis, the land of the future.

We still retain the festivals of the Great Mother. It is true that Judith survived the glad day of freedom only by ten years, but Urania was elected in her stead to the office and still rules in it as I write this.

Aside from her, I am the last of my generation. Hurst and Flius have gone to their reward, though the line of Flius and Irmfried has grown rather than diminished. And to you of the new age, I leave this, out of the wisdom of experience—struggle and war are the sources of all progress! Let mankind be one, and bear yourselves, Atlanteans, in such manner that you will be ready to meet any attack that comes against you from any part of nature. Be masters of the earth, not like the Drusonians, drawing weakness and parasitism from your mastery, but strength for new struggles. Be watchful. Let the name Drusor be ever, as it is now, a curse on anyone who attempts to rule mankind and the earth that belongs to mankind. Remember the great words of Ferryman, the leader, "Do not make men into things, beasts into men, or things into Gods!"

I set all this down in the happy days,

thirty years after the liberation of the earth, when Druso has again become a feature of our skies and has spoken to us through gigantic winkings of lights. As I write, the age-old long-short-long of the Morse code has brought good news to replace the first fright at the appearance of the unfriendly star. The Drusonians are annihilated and Cassaniak's son rules the robber-planet; the conquerors have become the conquered. And perhaps the day will now come, and at no very great distance, when Druso will once more be a satellite of the earth, not as the evil enemy and ruler, but as a friend and helper.

But be on the watch and remember that whoever for a moment believes that nature is at peace will go under in her continual strife.

Appendix

● During Liuwenhord's sermon in Chapter XIII, he read the following extracts from Ferryman's words:

"And he opened up the book, and read these words from the hand of the great leader of the past ages:"

* * *

The thinker lies in his bed all night, yet sleep does not come to him. His thoughts reach out into the dark, and beneath him runs a rushing river whose waves are called Sorrow and Torture. And the bed becomes a boat and is borne away on the rushing river through the German land.

And behold, the glare of Hell reddens the dark. Things blacker than the night rise up, the slender towers and dark bridges start over the water and the earth is filled with the houses of men.

Empty were the streets and dark; a sighing mounted from the stones of the pillars, weapons clashed, and machines of death rumbled through the squares. The whips of the oppressor whistled through the air, and then the whole land ceased to breathe.

But the waves of Sorrow and Torture carried the boat farther, and behold, the rushing river mingled with the Rhine and the waves carried the boat to a little island in the stream. Gently it held it against the land.

The prophet walked on the island; the sun shone brightly; on his right there rose a hill, glorified by the fingers of the morning. His foot was compelled to tread out a thicket, and there flew forth crows, jackdaws, and all hateful birds. And when he had trodden the thicket, he found in a little place the walls of a chapel whose roof was destroyed; through the window grew ivy and vines.

Through the riven portal he entered a little room filled with thistles and weeds. Above him the blue sky was filled with the cries of the black birds, but when he strode forward, they came to sit next to each other on the edge of the wall, one next to another, and looked at him with evil eyes, and pointed at him with evil beaks.

But where the latter had once stood was a pile of refuse, and before the pile of refuse knelt a monk in a white robe, sunk deep in thought.

And when the prophet came to him, the monk turned his head, stood up and greeted him with these words, "Long have I awaited you, yet now when you are come, the last wall is nearly fallen."

But when the prophet asked, "Who art thou?" the monk replied, "Behold, I give a sign in a word that shall lay hold on you and that will name me to you." Thereupon, there arose a shrieking from the wall, and the daws and robber-birds flew away, but afterwards there came a gentle wind through the windows and doors of the place and gently came the words of the monk, "God sleeps in all things and will awake in the heart of man."

Thereupon the prophet cried, "Have I indeed thee, Master Ekkehard?" and would have kissed the monk's hand. But he would not permit it, and pointed to him and bade him look, and behold, the broken wall seemed to draw strength from the depths of the earth and grew

and spread like a forest and widened and became a cathedral of height and glory, and the voices of children sang the joy of the hour to the music of an organ. . . .

But it happened that the prophet stood on the border of a great ocean and felt the rush of the wind and saw how little waves played on that ocean as though there were a gentle beating of wings beneath the surface of the water.

Then he heard near him the voice of the monk, though he saw him not.

And the monk said, "Behold the sea, which does not move its water of its own strength, but as the wind listeth to give it strength.

"Behold, it is not thou who wishest and thinkest, nor is it thou thyself that doth read and write. There is another, without thee, that permitteth thee to desire and think, and ordereth thee to read and write."

Then there fell from the mountains a storm which tossed the ocean aloft, so that the water rushed up onto the strand. But the heart of the prophet beat fast and his blood flowed rapidly and he cried, "How then, shall I, who am a man, be nothing but a plant or a stone? Shall I no more be master of my own thoughts and wishes? Shall I not have the freedom of mine own self?"

Then the invisible one laughed aloud, and said, "Didst thou not learn the names of things from thy father and thy mother, and have not others thought before thee of what thou shalt eat and clothe thyself with? Name then one thing that thou doest that some other man has not taught thee.

"Thy mother bore thee in her womb, yet when the bond that bound thee to her was cut, didst thou then lose her blood?

"Even so hast thou no more any thought of thine own no more than thou hast any drop of blood that did not belong to another before thee.

"Thine ancestors live within thee, with their blood, with their life, with their sorrows and their joys, with their desires and their strength and their beauty.

"And therefore, thou man, it is in thee wrong to say, 'I am; I do; I think.'

" 'It' is within thee all powerful; 'It' thinks within thee; 'It' acts within thee.

"But he who knows a secret, who thinks not and does not and wishes not as an I, he shall win peace and joy, which is this—We are all one in God.

"But this, master-preacher, shalt thou preach:

"That there is no new thing; only things renewed. Those who go forth shall not see that all things return in cycles. The stars move in cycles and the constellations, one around another. In cycles are all things caught. Who, then, shall stride forward and think to make his own way?"

THE END

WHAT IS YOUR SCIENCE KNOWLEDGE?

Test Yourself by This Questionnaire

1. Where are the tribes of Zulus located? (See Page 137)
2. What effect has morphine and opium on the human body? (See Page 148)
3. What is the scientific term for mind-reading? (See Page 159)
4. How is electricity produced—from what fuels? (See Page 162)
5. Who is thought to have originated the legend of Atlantis? (See Page 164)
6. Is the orbit of the moon perfectly regular? (See Page 166)
7. What are triremes? (See Page 171)
8. How much would an earth-pound weigh on the planet Mars? (See Page 179)
9. What effect will concentrated sulphuric acid or quicklime have upon water? (See Page 188)
10. Describe one of Dr. Coolidge's experiments with the cathode ray. (See Page 199)
11. What is the Tesla law concerning the amount of electricity a man can stand passing through his body? (See Page 224)

THE LAST SHRINE

By Chester D. Cuthbert

(Continued from page 209)

This sensation quickly passed and we heard a great shout of exaltation from the prostrate Indians. They, representatives of a race which had waited ages for this climactic event, were seeing a great prophesy fulfilled. In accordance with the Word of the Gods, they beheld the reward of Faith—a Goddess made mortal for their sake.

● Peacefully, contentedly, exaltedly lived the Indians. If their Goddess seldom revealed signs of her former divinity, was this not natural in one who had become mortal even as they? In perfect happiness a few years passed. Occasional pilgrimages were made by all to the Shrine, where the Word rested upon the couch which had been Xenolie's. Then I told the people, as gently as I could, that I wished to take their Goddess on a journey to the outer world so that many nations might hear all that she might tell them. Though they seemed heartbroken at thought of her departure, they consented, for, they said that their own happiness must in some measure be shared with all the outside world.

On a bright, sunny morning of one of the curiously long days now enjoyed in the valley, Xenolie and I set out. We had approached the inner rim of the valley when a bird fell at our feet. Startled, I picked it up and examined it. No wound was apparent, and when I made an incision with my pocketknife, the blood was fresh and warm. Xenolie waited a moment while I walked to the limit of the valley's rim a few feet away where I noticed a slight haze much like the heat waves one sees beating up from the surface of a hot rock. Carefully, I extended my arm.

A feeling of numbness similar to that experienced at the Veil told me the truth. Slowly I drew back, and silently I returned to Xenolie, who was anxiously watching me. She, too, realized what had happened: the compressed gas in the insulated vases had been more than sufficient to accelerate the time-rate of the atmosphere of the Shrine to that at which the outer atmosphere existed; it had continued to accelerate, through the years that had passed, the luminiferous ether both in the shrine and in the outer valley. Even as the days from winter to spring grow gradually longer unnoticed, so had the days in the valley. The valley is so sheltered that the winds have not dispersed this quickened atmosphere into the outer world where it would have been quickly dissipated. The difference in time-elements is great enough to create a barrier effectively preventing any attempt to leave the valley with Xenolie. Especially so since Xenolie has grown so fragile in the past few months.

● And so I have written out all that has occurred to me since I left the Orient so long ago. I shall thrust this account outside the atmosphere of the valley, and if it is discovered in time, it may be possible for someone to come and hear the stories Xenolie tells me of her life in the old time. But as for me, I am quite content to stay with her few remaining Indians and with them to worship Xenolie. For is it not infinitely better to be happy with her than to be a wanderer on the face of the Earth away from her?

THE END

NOTICE: That our Editorial Offices have moved from 98 Park Place to 99 Hudson St., New York City

ENSLAVED BRAINS

By Eando Binder

(Continued from page 155)

been in government and state affairs, social life has not changed to a great extent. Here in 1973 the people still play and sing and gossip. There are still theaters, movies, parties, banquets, and idle recreations—perhaps too much of the latter with the short modern working week. In short, man as a social animal has not changed much even though vast political turnovers have taken place. We still have our foibles, pet peeves, petty faults, and idiosyncrasies. To tell the truth, Dan, in a few weeks, after you've been around and seen and heard all the new things, you will feel that, after all, 1933 and 1973 are just numbers as far as human nature goes."

The airport was small to Williams' eyes; he had seen bigger ones forty years before. But he understood when Hackworth explained that it was only one of hundreds spread all through the residence sections for private craft. It had a ridiculously small landing field, but an impressive hangar.

Then Hackworth's ship came from the hangar, a fair-sized one with twin motors, into which they stepped. Its front, like all aircraft of 1973, was of flawless glass, allowing perfect vision ahead and to each side. The controls, rear fins and all, were embodied in a driving wheel and foot throttle. Hackworth took altitude with careless experience. At a thousand feet, he tripped a small lever on the dashboard.

To their ears came a faint staccato tapping above the muffled engine buzz. Hackworth swung to one side till the noise became louder and less shrill. Suddenly there was a chorus of new sounds with a regular rhythm. He pulled over the engine lever and began a swift climb. Another series of fluted notes and he leveled out. They were at five thousand feet. Hackworth relaxed a bit.

"You see, Dan," he explained, "one must fly carefully around New York, or any big city. The air is divided into zones and lanes for different types of craft. Those sounds are lane signals. By means of them, an experienced flyer can fly with his eyes closed. They tell me what lane I'm in, where to turn, where to rise or descend and what speed limit to observe."

While in the lane, the noises went on regularly and not unpleasantly.

Hackworth pointed to striped ships that they passed at long intervals.

"Air-traffic police."

The traffic soon became heavy as they approached down-town New York. To one side, a steady stream of small Sans-run craft flowed by. To the other side and a thousand feet up darted larger ships with multiple engines. High above in endless rows were passenger ships bound for, or returning to, distant cities. Hackworth made another ascent when the signals fluted, and leveled at nine thousand feet. From this viewpoint, Williams could see a geometric pattern of air-traffic spread over New York like a fisher's shimmering net.

They followed a weaving course that circled them past the southern edge of down-town New York. From this height it looked yet more unreal than it had from the ground, Williams reflected. He had a mental picture of 1933 New York in his mind, which he compared with what his eyes saw in 1973. Down-town crawled inward considerably, had become less pointed and spired, and had fallen the victim of a titanic spider which had spun an intricate web between the interstices of buildings.

Hackworth piloted the ship in the Long Island lane.

"The Unidum Capitol," he said, pointing downward.

(Don't miss next month's instalment. The first four chapters are really an introduction to the thrilling adventures to follow.)

VOICE OF ATLANTIS

By Laurence Manning

(Continued from page 172)

"Did you rebuild the helmet?"

"Tried to. I'd have sworn it was rebuilt exactly the same way — but I'd dropped the first one, you remember, before I got any results. The fall must have bent it slightly to make some different contact or arrangement of circuits —anyway, I've spent the last year trying to do it again the same way .... nothing!"

"Well, he capped your yarn, at all events, LaBert," I said, rising to start homeward.

THE END

BOOK REVIEW

AFTER WORLDS COLLIDE—by Edwin Balmer and Philip Wylie. 341 pages. Stiff cloth cover, size 5⅝" x 7⅝". Publisher: Frederick A. Stokes Company. $2.00.

This book is a sequel to *When Worlds Collide* in which two stray planets visit the solar system from some distant space. One of them, Bronson Alpha (named after the discoverer), collides with the earth, completely destroying it, while the other, Bronson Beta, forms an orbit between Venus and Mars, though a different one than the earth. In the summer, Bronson Beta would be close to Venus and the sun, and in the winter it would be near the orbit of Mars. Therefore, the planet would be exceedingly hot part of the year and tremendously cold at other times.

Two hastily prepared space-ships filled with Americans leave the earth just before it is destroyed, and we are shown the fate of one of the ships, whose captain was Cole Hendron. They land safely on Bronson Beta, but their rocket tubes had been fused on the journey so that the space-ship was never able to travel space again. They send out radio signals, but receiving no reply from the other ship, in which Ransdell was captain, they conclude that it did not land safely.

There are only three hundred and three survivors on Cole Hendron's ship, and they go about starting a settlement. Upon exploration, they discover five lost cities of the Other People, those that had lived on Bronson Beta perhaps many millions of years ago, but who had to die or leave the planet when it was torn away from its native sun by some approaching star and cast into the void with its sister, Bronson Alpha. The exploring party can see by the cities that the former inhabitants, who were human beings, were far ahead of us in civilization.

Then a party from Cole Hendron's ship, including Tony, who was in love with Hendron's daughter, Eve, finally locates Ransdell's ship which had also landed safely, with few casualties. The two parties join, making one happy unit.

It is not long before they discover that another ship, one from Russia, had also crossed the void and brought to the new world a party of Asiatics who intended either to subjugate or destroy the Americans. They had some British captives and intended also to make slaves of the Americans. They control one of the five covered cities, the one that controls the light and heat of all of them. As Bronson Beta approaches Mars, all of its inhabitants must retreat into the warm cities. Just at the coldest time of the year, the Russians turn off the light and heat supplying the city of the Americans. They (the Americans) send spies to the Russian city, but it is one girl, a stowaway on Hendron's ship, who, through much scheming, kills the rulers of the Russians, which act demoralizes the rest of the would-be conquerors. The British captives are rescued. Meanwhile, Hendron had died, and the Americans had named one of the cities after him in memory. Tony married Eve, and the new population of Bronson Beta start their life on a new world, from the bottom up, with the science of the Other People to help them on their way.

This book, with *When Worlds Collide*, should go down with the first-rate classics of science-fiction. It is masterfully executed and should prove of interest to all lovers of fantasy. Particularly absorbing are the scenes in the cities of the Other People and their wonderful science. No science-fiction fan should miss this.

MOVIE REVIEW

THE END OF THE WORLD, a French science-fiction film with Abel Gance, Victor Francen, Colette Darfeuil, J. Brindeau, Sylvie Grenade, and Georges Colin; directed by V. Ivanoff; a Harold Auten production.

Martial Novalic, of the National Observatory in France, announces to the world that a comet is approaching from distant space and that in thirty-two days it will strike the Earth, destroying most of its life. He has hopes, however, that some shall be spared to start a new world from the chaos that the comet will cause.

Most of the population, except the scientists, do not believe his predictions and continue in their various businesses without interruption. However, it is not long before the comet is visible in the night sky, a brilliant point of light with a flaming tail. It is awe-inspiring, for the spectacle has had no parallel in history.

As the days go by, the populace becomes panic-stricken. Throngs flock to the worshiping places the world around. African savages tremble in their huts. Men in the Far East pray to their heathen idols.

Some seek relief through revel—practicing every known vice in order to enjoy their last hours upon the earth. But most flee the cities like blind pigs. Terrified, they lose their senses and become inhuman, unreasoning creatures.

As the last hour approaches, the ocean, rivers, and lakes overflow. Volcanoes erupt, and earthquakes end innumerable lives. The police, who had intended to arrest Novalic a few days before with a charge of treason, become maddened like the rest and forget law and order, for it was impossible to control the people.

Through some unknown miracle, the comet is deflected from its course and does not strike the earth, but the damage wrought by its close approach had almost destroyed civilization, though many survive. Men of all races have sworn that they would no longer fight among themselves, but build one strong race with harmonious ideals. The common terror caused by the comet had made them one.

We urge you to see this picture if it comes to your neighborhood. It is one of the most spectacular productions of fantasy that the French have ever made. English titles make the movie thoroughly enjoyable.

By Joining the
SCIENCE FICTION LEAGUE
You can secure cash discounts on
SCIENCE FICTION BOOKS
—for details see page 249
and the
SCIENCE FICTION LEAGUE
Department in this issue

Science Questions and Answers

THIS department is conducted for the benefit of readers who have pertinent queries on modern scientific facts. As space is limited, we cannot undertake to answer more than three questions for each letter. The flood of correspondence received makes it impractical, also, to print answers as soon as we receive questions. However, questions of general interest will receive careful attention.

THE ASSOCIATE SCIENCE EDITORS OF WONDER STORIES
are nationally-known educators, who pass upon the scientific principles of all stories.

ASTRONOMY
Dr. Clyde Fisher, Ph.D. LL.D.
Curator, The American Museum of Natural History

Professor William J. Luyten, Ph. D.
University of Minnesota.

ASTROPHYSICS
Donald H. Menzel, Ph.D.
Harvard College Observatory.

AVIATION
Lt.-Col. William A. Bevan, B.S., M.S., M.E.
Air Corps Reserve, Professor of Aeronautical Engineering, Iowa State College.

Professor Earl D. Hay, B.S., M.S., M.E.
Head Department Mechanical and Industrial Engineering and Professor of Aeronautics, University of Kansas.

Professor George J. Higgins, B.S., Aero. Eng.
Associate Professor of Aeronautical Engineering, University of Detroit.

Professor Felix W. Pawlowski, M. A. E. E., M.S.
Department of Aeronautical Engineering, University of Michigan.

Professor John E. Younger, B.S., M.S., Ph.D.
Department Mechanical Engineering, University of California.

BOTANY
Professor Elmer G. Campbell
Transylvania College.

Professor Margaret Clay Ferguson, Ph.D.
Wellesley College.

Professor C. E. Owens
Oregon Agricultural College.

CHEMISTRY
Professor Gerald Wendt
Editor, Chemical Reviews.

ELECTRICITY
Professor F. E. Austin
Formerly of Dartmouth College.

ENTOMOLOGY
William M. Wheeler
Dean, Bussey Institution for Research in Applied Biology, Harvard University.

MATHEMATICS
Professor Waldo A. Titsworth, B.S.
Alfred University.

MEDICINE
David H. Keller, M.D.

PHYSICS AND RADIO
Lee deForest, Ph.D. D.Sc.

PHYSICS
Professor A. L. Flint
University of Maine.

PSYCHOLOGY
Dr. Marjorie E. Babcock
Acting Director, Psychological Clinic, University of Detroit.

ZOOLOGY
Dr. Joseph S. Yoshioka
Yale University.

The Rotating Wheel

Editor, SCIENCE QUESTIONS AND ANSWERS:

I have a few questions to ask you.

(1) What is the theory of the fourth dimension, and do you believe there is such a thing?

(2) If a hole were cut straight through the center of the earth and a person jumped in, would he stop at the center of the earth or would he go out the other side?

(3) Is there any part of a rotating wheel that does not turn? That is, at the outside, the wheel goes much faster than it does as you go toward the center, and the rotation becomes slower and slower until—

I am a reader of WONDER STORIES and I wish you would please answer these questions in your Science Questions and Answers department.

DAVID BOWEN,
Oil City, Pa.

(1) We have discussed the fourth-dimension theories constantly in these columns. This, like the beginning of time and the finite universe, is beyond our comprehension; and we cannot say whether there is such a thing or not; unless you wish to call it time, or "duration," which every material thing must have.

(2) Because of centrifugal force, a person falling down a tube toward the center of the earth would never reach the center. He would be pressed against one side of the tube and be consumed by material friction long before he went four thousand miles. However, were it not for this friction, he would pass the center of the earth; for by the time he reached it, he would be traveling at a great speed, so great (caused by the continual acceleration) that he would go thousands of miles past the center, though not as far as the other end of the tube. He would continue to swing back and forth, like a pendulum, until he finally came to rest at the center of the earth.

(3) Theoretically, the exact center of a rotating wheel would be motionless, taking into consideration the fact that the rotating speed decreases as you approach the center; though for all practical purposes, the entire wheel rotates.—EDITOR.)

Mental Telepathy

Editor, SCIENCE QUESTIONS AND ANSWERS:

I am asking you a question that is greatly perplexing me. I have been reading scientific fiction magazines ever since 1926 and yours ever since it came out. So I believe I have a fair chance of your answering.

I read in the March, 1932, issue of WONDER STORIES a story named "Waves of Compulsion." I will quote a statement I read: "We do know that, in a feeble way, mental telepathy is possible today."

Now here is the question I wish to ask you: Is mental telepathy possible?

ALVA KENTELLER,
Topeka, Kans.

(So far, to our knowledge, no one has proven that mental telepathy is really possible. Several scientific magazines offer large sums of money to any persons who can prove, to their satisfaction, that they have mastered the miracle. "Science and Invention" was one of these magazines during the time that Hugo Gernsback was editor and publisher. Their test for mental telepathy was simple and infallible. They took two persons who claimed that they had the ability to project their thoughts to each other, and placed them in separate rooms, some distance apart, with no means of communication. One subject was given a book that he had not seen before. A page was turned to. The subject read it. If his partner in the other room could repeat the substance of that page from the mind of the other subject, it would prove telepathy conclusively. However, though many people came to take the test, not one ever passed it. Perhaps some of them really thought that they could do it. For all we know, they might have been able to do it under different circumstances but could not repeat it when put to test. We believe that mental telepathy

may not be impossible and that it will perhaps be accomplished in the future. How far in the future, we do not wish to estimate. Perhaps we shall have to wait until the mind of man is further along the evolutionary scale, when his mental faculties are developed to a much greater extent than they are today. While man is the most intelligent creation on the face of the earth, there are many, many problems he has yet to cope with.

We know that certain vibrations emanate from the mind. This is proven by hypnotism, which is not a fake. Clyde Beatty, the famous animal trainer, uses his will power to calm wild beasts and has saved himself more than once in this manner. It is all a matter of superior mentality. Undoubtedly, anyone of mature age could hypnotize a wild beast if he could first overcome his primeval fear, which few can do. For a person to be hypnotized, he must be a thoroughly willing subject and the hypnotist must have a stronger mind. Mental telepathy, though a theoretical science, is intensely interesting, for it is perfectly logical that people should some day be able to read each other's minds and transmit their thoughts. —EDITOR.)

This illusion is very possible and has undoubtedly led to many wild tales.

The giant squids, which live in the deeps of the oceans, have twenty-foot long bodies, but are hardly thin enough to be called sea serpents. They very rarely come near the surface and few people have observed them alive.

The old Vikings conceived the "Kraken"—a monster so large that you mistook it for an island, only to have it duck under you. Mythology and other ancient writings are filled with preposterous stories of such creatures, though most of them can be dismissed as fairy tales. Perhaps some obliging sea monster will some day crawl up into Battery Park—when we see that, we will be convinced. You will find an illustration on this page of various conceptions of sea monsters.—EDITOR.)

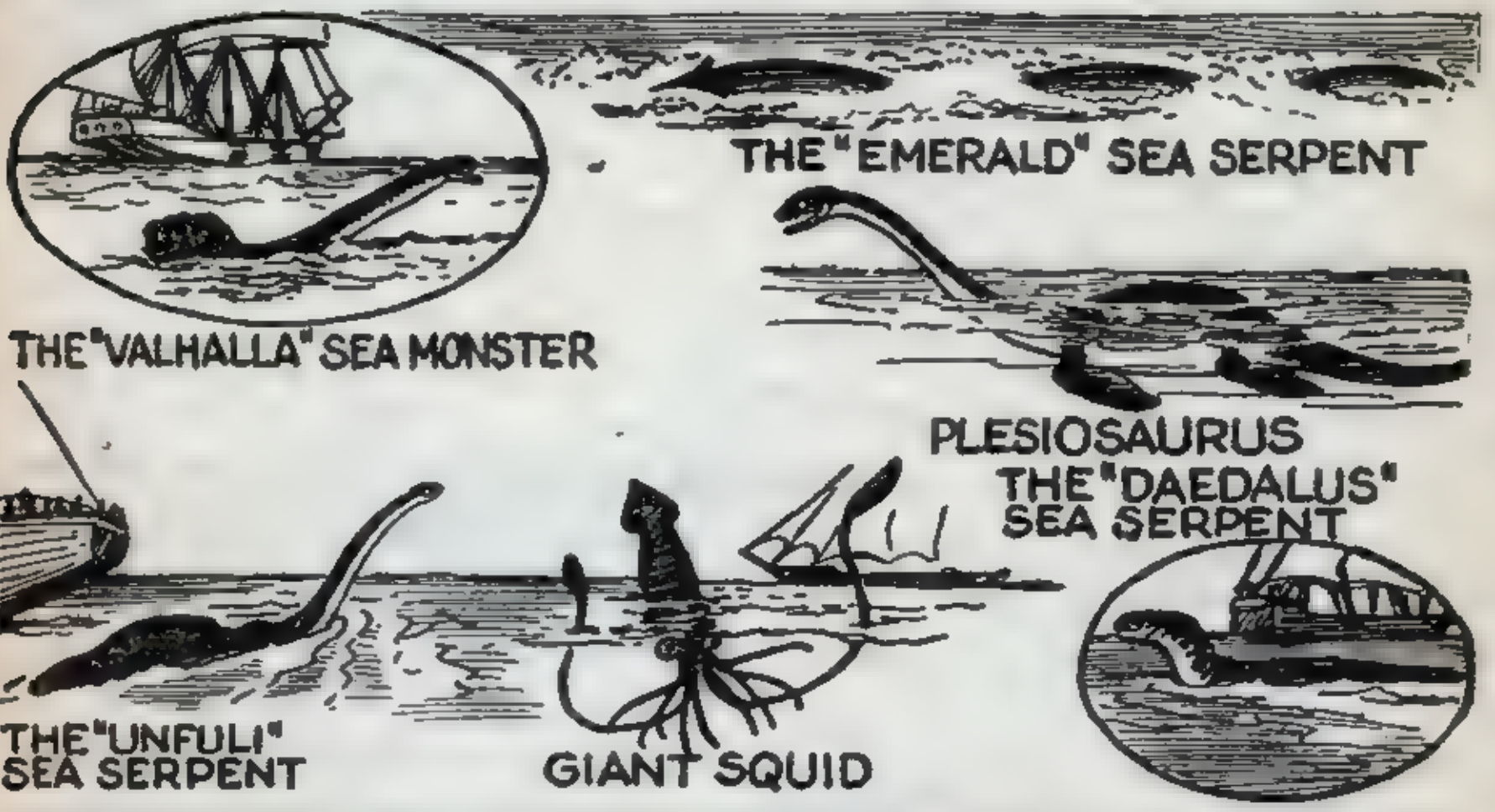
Locating Subterranean Substances

Editor, SCIENCE QUESTIONS AND ANSWERS:

A short time ago I read of an apparatus that projected a radio wave into the ground and by measuring the length of time necessary for the signal to be reflected back (from some hard object such as metal or rocks) determined the distance underground to a metallic deposit, etc. I would appreciate any information you could give me on that subject. Do different wavelengths reflect differently from the same substance?

ORVILLE E. OWEN,
Wills Point, Tex.

(Such an instrument as you describe is in use, but can only be operated successfully and to full advantage by an expert geologist. It is used primarily for determining the shape of the subterranean ore body and its variations in depth. Though this is its most useful purpose, it can determine, to some extent, the nature of the material from which the radio waves are reflected. Iron, for instance, will reflect the waves more intensely than many other substances, though it cannot always be determined what the underground substance is. Different wavelengths do not reflect differently from the same substance. There cannot be enough variation in radio vibrations to change the intensity or rate of reflection.—EDITOR.)



Sea Serpents

Editor, SCIENCE QUESTIONS AND ANSWERS:

All through history you read of sea serpents and monsters of the ocean. It was the fear of such creatures that made it hard for Columbus to gather a crew to cross the Atlantic. They have been mentioned so frequently that they must have some basis on fact. They cannot all be extreme exaggerations. Isn't it possible that sea serpents really exist in the deepest parts of the ocean, showing themselves but very rarely? People are so unbelieving and generally skeptical that they do not believe anyone who declares that he has seen a sea serpent. What do you think about it?

FRANK D. KULL,
Fort Conklin, Wyo.

(Nothing tangible has ever been found of any sea serpents as conceived in history. Human nature has always leaned toward gross exaggerations and this perhaps accounts for most cases. There is no doubt that really huge sea creatures existed in prehistoric times; but it is unlikely that any have survived, any more than has the saber-tooth tiger, the dinosaur, or the pterodactyl. A school of fish near the surface of the water may give the impression of a sea serpent when in favorable formation, as though a huge coiled body were beneath the water.

(Continued on page 260)

The SCIENCE FICTION LEAGUE

—a department conducted for members of the international SCIENCE FICTION LEAGUE in the interest of science-fiction and its promotion. We urge members to contribute any item of interest that they believe will be of value to the organization.

EXECUTIVE DIRECTORS:

FORREST J. ACKERMAN
EANDO BINDER
JACK DARROW
EDMOND HAMILTON
DAVID H. KELLER, M. D.
P. SCHUYLER MILLER
CLARK ASHTON SMITH
R. F. STARZL
HUGO GERNSBACK, *Executive Secretary*
CHARLES D. HORNIG, *Assistant Secretary*

THANK you, members! Your response to the organization of the SCIENCE FICTION LEAGUE has shown us that we have many, many more loyal fans than we had dared hope for—and we deeply appreciate your co-operation. Though the LEAGUE has by no means had time to get under way as yet, many of our readers have joined. It is very easy to join a large, powerful institution, which the SCIENCE FICTION LEAGUE is bound to be when it is well on its feet. As this issue goes to press, the LEAGUE has several hundred members, all secured during the time that the May issue was on the news stands, one month, which is much better than we had expected. George Gordon Clark of Brooklyn, New York, is Member Number One of the LEAGUE and we hope that he will find it something to be proud of in the years to come.

It has taken some time to organize the LEAGUE, but the essentials have at last been prepared and are ready for all members, those that have already joined and those that intend to. Remember, you must be a member of the LEAGUE in order to secure the handsome lapel button, letterheads, envelopes, and seals. Every letterhead has the name of the member printed on it. These are described more fully on page 255 of this issue.

We hope that several thousands of our 75,000 readers will join the LEAGUE in the months to come, for the more members we have, the easier it will be to spread the gospel of science-fiction and increase our followers. Science-fiction is the only educational literature in the world and it broadens the minds of the readers. Remember that, members, and emphasize it at every opportunity. Those two facts alone will gain innumerable fans. Science-fiction can well be likened to some of those pleasant-tasting medicines you see advertised—it does you good and you like it. Everyone cannot digest science in "cold-fact" form, and science-fiction is for such people. More important than educating, though, is its facility for making you want to learn more about things that can only be hinted at in science-fiction. This imaginative literature has encouraged many of our readers of years ago to become interested in chemistry, botany, geology, and other sciences and they are prosperous today because of this inspiration. There is not the slightest doubt that, had they not first read science-fiction, they would never have become interested in science, believing all their lives that they never could like it nor make any of its branches a life-work. Science-fiction aims to better civilization and so must have vigorous followers who realize its potentialities and are determined to open the eyes of others to these facts.

THE TEN LUCKY MEMBERS

You will remember that in last month's issue it was announced that the first ten members of the SCIENCE FICTION LEAGUE would receive a gift from David H. Keller, M. D., the favorite author of thousands of fans. When this was announced, the ten members had already joined, not knowing what was in store for them. The winners, and the first ten members of the SCIENCE FICTION LEAGUE are:

George Gordon Clark, Brooklyn, N. Y.
John Theodore Wiese, New York City, N. Y.
Robert Hart, Wethersfield, Conn.
Kenneth Sterling, New York City, N. Y.
William H. Dellenback, Chicago, Ill.
George Forbes, Arlington, Mass.
Jacob K. Taback, New York City, N. Y.
Stephen R. Tucker, Wallingford, Conn.
Frank Phillips, Jr., Pennsgrove, N. J.
Harry Bocsel, Chicago, Ill.

None of these winners have any connection whatever with the Gernsback Publications. The ten winners are requested to write to Dr. Keller under the following rules:

Rule One: Write your letter in ink on one side of 8½ by 11 paper, leaving a two-inch margin.

Rule Two: State the three stories written by Dr. Keller that you consider his best.

Rule Three: State why you like Keller's stories and why you want to add one of his original manuscripts to your collection.

Upon receipt of these letters, Dr. Keller will send an autographed letter and an original manuscript to each of the lucky ten. Please write first to the Assistant Secretary for Dr. Keller's address.

This generous offer is the first act in the SCIENCE FICTION LEAGUE to bring the readers and authors closer together in the bond of friendship.

MEMBERS' CORRESPONDENCE

Of course, it would be impossible to print the names and addresses of all the members of the SCIENCE FICTION LEAGUE in this department, for it would come to look more like a telephone directory than a fiction magazine, and furthermore, were we to do this, various members would receive so much correspondence from others that they would find it impossible to answer it all, which would be fair neither to the writer nor the receiver.

However, our stationery was made for a purpose, and we intend to make proper connections between members. We would like you to write us, those of you who would like to, telling us whom you would like to correspond with in the LEAGUE. Send in your entry after the following example:

"John Dow, Box 1, New York City, N. Y.—boys between the ages of seventeen and twenty in New York State."

That is an example. By doing this, you will be able to correspond with only those whom you would enjoy writing to most. This will prevent you from being overburdened with mail from all quarters of the country (and the world, as time goes on) from members of all ages. There are two rules that our members will have to observe carefully, however. You must answer all mail that you receive, filling the requisites of your entry in this department, and you

must not write to some one who does not request correspondence from members of your age or from your neighborhood. Such correspondence can be ignored without unpleasant results from members or Headquarters.

DOINGS IN THE LEAGUE

Several of our members have already got busy in boosting the LEAGUE and science-fiction on their own hook, among whom is L. A. Eshbach, famous science-fiction author. Here is an excerpt from one of his recent letters:

"It happens that I am about to speak, as a science-fiction writer, to a group of about a hundred men and boys on Tuesday, April 17, using the subject, 'The Prophetic Nature of Science Fiction.' It occurred to me that this would be a golden opportunity to give the SCIENCE FICTION LEAGUE a big boost. Although I am not acquainted with my prospective audience, I feel certain that there will be a worth-while number of science-fiction fans in the group. With that thought in mind, I wish you could send me a number of application blanks for use in the meeting. I think the SCIENCE FICTION LEAGUE an excellent idea, and it should do much toward the popularizing of science-fiction."

We have sent Mr. Eshbach a number of application blanks and will be pleased to send as many as required to other members who feel that they can persuade their friends and acquaintances to join. It is such things as this speech given by Mr. Eshbach that we intend to sponsor—meetings, publications, announcements—everything to aid the cause.

For years, Raymond A. Palmer of Milwaukee has built up a powerful scientific organization known as the International Scientific Association, popularly known as the ISA. This institution, Mr. Palmer informs us, has chapters all over the world, totaling more than 400 members. As his first step, he intends to make the ISA a branch of the SFL, with each group of members a chapter of the SFL, "so," he says, "I have no doubt that you will immediately have some 400 members working for you tooth and nail."

Thank you, Mr. Palmer; you're a credit to the SCIENCE FICTION LEAGUE.

From Milton Rothman of Philadelphia, we hear: "I am going to try to start a local chapter of the SCIENCE FICTION LEAGUE in the Central High School. The president of the student council reads science-fiction, so my task is materially lessened."

As we stated in last month's issue, a local chapter of the LEAGUE can hold its regular meetings in a high school or any other educational institution as well as a hall, with students in the school as members. We are sure that any school which allows club rooms and periods will be proud to harbor a part of the SCIENCE FICTION LEAGUE.

We would not try to count all of the enthusiastic letters we have received from members accompanying their membership certificates, but the following excerpt from the message of David A. Kyle of Monticello, N. Y., is typical of the enthusiasm:

"Ever since the May issue came out, I've been running around in circles I just feel like shouting with all my might and beating a tin pan. You've guessed it!—It's the SCIENCE FICTION LEAGUE! That's something that I've been trying to start for the past year. The principles of it simply take my breath away! I hope it results in international correspondence. The principles are excellent. The insignia is excellent. The Board is excellent. Gosh—everything's excellent! And speaking of the Board, it looks like a Hall of Fame, with Forrest J. Ackerman and Jack Darrow on it. I recognized the insignia at once when I saw it. The space-ship is the same one that was illustrated on the cover of the first SCIENCE WONDER QUARTERLY published. The name of it was the *Gregon*."

From all points of the compass have come letters stating that the LEAGUE is "the greatest thing in years"—in many different ways and in various degrees of enthusiasm, and we are convinced that the situation cannot be exaggerated. The science-fiction magazines alone are not enough—there must be a movement, such as the SCIENCE FICTION LEAGUE is about to provide.

ADVANCE SUGGESTIONS

Here are a few advance suggestions of how you can help the SCIENCE FICTION LEAGUE:

(1) If you wish to form a local chapter of the LEAGUE, get a newspaper to print a notice in the society or club section. They will do this free of charge and it will aid you in securing many members.

(2) Send to Headquarters all the suggestions that you believe will improve the SCIENCE FICTION LEAGUE and its activities. You may have some valuable ideas that will greatly aid the cause of science-fiction. This department will appear monthly in the magazine and will be used as the voice of the members and executives, so do not hesitate to use it freely.

(3) If you are a student in high school or college, try to form a chapter of the LEAGUE in the building, with students as members. Most educational institutions allow for clubs of all sorts and would be pleased to harbor one more, especially one with standards as high as the SCIENCE FICTION LEAGUE. These school chapters will be treated by Headquarters as any other chapter. In order to form a chapter of the LEAGUE, send your name to us with those of all other members who wish to form the chapter and the name under which the chapter will be known. We will send you an officially signed certificate, confirming the existence of the chapter with its number.

(4) Try to write editorials propounding the merits of science-fiction in general and place them in your local newspapers. Stress the fact that science-fiction is educational and broadens the minds of the readers.

(5) Study science-fiction carefully and form a series of conclusions in your mind as to its merits and accomplishments. Organize your ideas so that you can talk freely and convincingly to potential followers on the subject. Be able to tell at a moment's notice just what it is and why you are an enthusiastic advocate. This, with Suggestion Two is very important to the purpose of the LEAGUE. All members who are instrumental in securing any special attention to the LEAGUE will receive due acknowledgment and will find that it will be profitable to them to be so mentioned.

Rome was not built in a day, we have often been told, and the same can be said for the SCIENCE FICTION LEAGUE. Organized only a very few months ago, it has not had time to develop as yet. Plans will materialize as we go along. The LEAGUE has one prime purpose—to spread the worthy gospel of science-fiction. That is the basis of the LEAGUE, and its goal will not be reached until everyone knows of science-fiction and respects it as the most powerful literary force in the world. We can hardly hope for this for a long time to come, but every scheme, plan, or idea that will aid us in reaching that goal is welcome. New ones will be broached every month by the executives and members—will you do your part? We do not expect every member to have an inexhaustible reservoir of ideas, but we will appreciate all suggestions offered.

If you have not as yet joined the LEAGUE and wish to do so, you will find application blanks in another part of the magazine.

The Lost Continents

WERE there really great civilizations in Atlantis, Mu, Lemuria and other regions of the world which no longer exist, except as stretches of the ocean bottom? What is really known on the subject? What has been the evolution of the earth's geography; what was the original home of mankind? What changes in the earth's surface may be expected during the lifetime of the human race? You will find a great deal of information on these debatable points in the July issue of

EVERYDAY SCIENCE AND MECHANICS

NOW ON ALL NEWSSTANDS

The Reader Speaks

IN this department we shall publish every month your opinions. After all, this is your magazine and it is edited for you. If we fall down on the choice of our stories, or if the editorial board slips up occasionally, it is up to you to voice your opinion. It makes no difference whether your letter is complimentary, critical, or whether it contains a good, old-fashioned brickbat. All are equally welcome. All of your letters, as much as space will allow, will be published here for the benefit of all. Due to the large influx of mail, no communications to this department are answered individually unless 25c in stamps, to cover time and postage, is remitted.

Wonder Best, Says Darrow

Editor, WONDER STORIES:

I believe that the stories in the present WONDER STORIES can be considered as good as those in any past issue, if not better. The only difference is the amount of reading given.

"Xandulu" is one of Jack Williamson's best. I consider this author better than A. Merritt, and that is saying something. There are a number of scenes in this story that would have made good covers.

"The Land of Mighty Insects" by A. C. Stimson is the second best in the April issue. It is marred only by the ending. Please give us a sequel. Why must we have tragic endings in stories? Don't we have enough of it in real life? We, or at least I, read stories for enjoyment and to forget the tragedies of real life.

"The Menace from Space" by John Edwards is a good example of the improved science-fiction now being turned out by WONDER STORIES.

Glad to read another story by R. F. Starzl. He has been absent for quite a while.

John Beynon Harris has always been a favorite of mine. I enjoyed "The Moon Devils." The short-short by Milton Kaletsky was short and sweet.

Paul's cover is well done. I have always liked Paul's Lunar scenes.

If you re-issue the QUARTERLY or put out an ANNUAL, please do not publish stories that have already been printed in WONDER STORIES.

Concerning the modern make-up. I like it, but it can be improved. The lines on the illustration page are too heavy for the small size. I suggest that you narrow them slightly and increase the number to three. One at the top, and two at the bottom enclosing the description of the illustration.

WONDER STORIES contains the best science-fiction stories and illustrations. It is bringing back the old thrill formerly given us when science-fiction was younger. It won't be complete, however, unless a return to the dignified large size is made, but I am afraid that the editors do not understand.

JACK DARROW,
Chicago, Ill.

(We are glad that you call WONDER STORIES the best science-fiction magazine. Your opinion is to be respected. In your last sentence, you insinuate that the editors do not understand the situation concerning the best shape and size of the magazine. Be assured that they do. We receive letters from hundreds of readers giving their opinions. We have the circulation figures, showing which size issues sell the best. And therefore, we know what we are saying when we declare that the small size magazine is the most appropriate.—EDITOR.)

His Wife Must Go!

Editor, WONDER STORIES:

I was married only four days ago but have already decided that either my wife or WONDER STORIES must go. She invariably comes in with some silly remarks about how the stove just exploded or how the yardman has fallen in the furnace and is unable to extricate himself just when I am at the most interesting point of some nerve-racking thriller, just at the moment when handsome young Gyles Garlocks is about to be tortured by a fiendish band of Martians or is fighting for life with a gigantic super-crocodile in an underground lake on Jupiter. There may be some arguments in her favor, but after all, it is not kind to let poor Gyles be tortured any longer than is absolutely necessary and it will not do the yardman a great deal of harm to tarry awhile in the furnace while we rescue poor Mr. Garlocks. There isn't much fire in it, after all. I really hate to put the little woman out, but I will not shirk my duty. I simply can't have Mr. Garlocks tortured because of any prejudice in favor of my wife.

My favorite story in the December issue was "The Saga of Captain Gyles Garlocks" by Sir Woodington Puddington, D.G.T., B. O. (or is it B.A.?)

HOOTINGTON TOOTINGTON,
Beefsteak, Ill

(We are sorry that either WONDER STORIES or your wife must go—and that you will have to get rid of your wife, but not as sorry as though WONDER STORIES were chosen for the exile. After all, wives are plentiful, you know, but there is only one WONDER STORIES. —EDITOR.)

Reprints Again

Editor, WONDER STORIES:

The last few issues of W. S. have been the best since early in '33, and the latest serial, "Exile of the Skies," has even ascended to the level of Laurence Manning's best, "The Wreck of the Asteroid." The best yarns were: "Caverns of Horror," "Menace from Space," "An Episode on Io," and "Spore Doom," and going back a bit farther, "Call of the Mech-Men" and "Through the Einstein Line."

Manning's "Stranger Club" series seems to promise another complete serial, such as "The Man Who Awoke" and "Revolt of the Scientists," which will be a welcome change from the ancient type of serial in which interest wanes before the concluding instalment. Although "Exile of the Skies" was such a one, in that interest held till the end, as Vaughan's literary style is not far short of pure genius.

"The Literary Corkscrew" and the promised "The Doorbell" seem to herald the return of Dr. D. H. Keller, all of whose stories were masterpieces. And now a kick: where has that muchly-mooted Dr. Epaminondas T. Snooks, D.T.G., been secreting himself? And, furthermore, what might "D.T.G." signify, Dippy Terrestrial Galoot?

"The Menace from Space" by John Edwards is an appreciated change from the usual run of interplanetary stories, in which the big, bad Martians attempt to capture Earth, and it is a sad but true fact that this is only the second story I have read in which ultra-Terrene creatures had not made attempts to capture the planet. (The other story was "The Message from Mars" by Ralph Stranger.)

Where are the old favorites, such as P. Schuyler Miller, Arthur Stangland, Nathan Schachner, Clifford D. Simak, D. D. Sharp, Edmond Hamilton, Arthur K. Barnes, Francis Flagg, Clark Ashton Smith, and Captain S. P. Meek?

In my opinion, the fifteen best stories (not serials) that W. S. ever published are.

1	50th Century Revolt	Arthur G. Stangland
2	Moon Era	Jack Williamson
3	Tetrahedra of Space	P. Schuyler Miller
4	Outlaws from Mars	Arthur G. Stangland
5	Crossroads of Space	Arthur G. Stangland
6	World of the Red Sun	Clifford D. Simak
7	Emperors of Space	J. Gross and R. Penny

8.	Derelicts of Ganymede ..	John W. Campbell, Jr
9	Ballum World . ..	Frank K. Kelly
10	Interplanetary Bridges	Ludwig Anton
11	Venus Germ .	S. F. Staral and F. Fragnell
12	Gulliver—3 000 A. D. .. .	Leslie Stone
13	Exiles on Asperus . . .	John Beynon Harris
14	Master of the Asteroid .	Clark Ashton Smith
15.	Beyond the Singing Flame .	Clark Ashton Smith

I move in agreement with A. H. Lybeck, in the April issue: GIVE US REPRINTS! I add "Human Termites" to the list compiled. If possible, bind the reprints in a separate issue and put them on sale at the main news stands.

The stories in the April issue scored as follows:

1. Menace from Space.
2. The Last Planet.
3. The End of the Universe.
4. Xandulu.
5. Land of Mighty Insects.
6. The Moon Devils.

"The Moon Devils" by John Beynon Harris did not compare with his other works, such as "Exiles on Asperus," "Wanderers of Time," "Invisible Monsters," "Spheres of Hell," and "The Third Vibrator."

Although most science poems are putrid, the current series by H. S. Zerrin are exceptions. And now a strident demand: Kindly run some paleontological stories, such as "When Reptiles Ruled" by D. N. Carroll, and sprinkle in some extinct animals.

And also a brickbat: Paul's cover illustrations on the January and April issues, depicting Earth as viewed from Luna, show a perfectly defined globe, much like a geographical model of our planet as seen from a distance. In a recent issue of the "Scientific American" there was an article on the appearance of Earth as seen from another planet, which stated, in brief, that the orb of Earth would be partly obscured by clouds, but Paul's illustrations seem to be directly opposed to this principle.

I hope you will not take my criticisms as the mere ravings of an anti-science-fiction crank.

GEORGE H. HEMMIG,
Los Angeles, Calif.

(We are glad to see the fifteen stories that we published that you liked best. The readers' choices are what determine the stories that we will accept in the future.

For our comment about reprints, all we can say is that we have a plan by which those who want them can have them and those that don't won't be forced to take them. Watch these columns for further news. If and when we do reprint, "The Human Termites" by Dr. Keller, which you recommend, will be one of them.

In the answer to another reader's letter, we stated that Paul must take some artistic liberties on the cover. Portraying the earth from the moon is one of them. You are correct when you state that our world would not appear like a perfectly defined globe, but the purpose of the cover is to convey an easily understood idea, and therefore we show the earth as it looks in a geography book, so that it can be recognized without the reader having a scientific education. —EDITOR.)

Our Fair Critic

Editor, WONDER STORIES:

Before I begin handing out nasty remarks, I want to let you know that I think WONDER is improving monthly, and I am whole-heartedly with you. I have fond memories of the old SCIENCE WONDER but I truly think that in a fair comparison, today's WONDER shows a decided improvement. "The Reader Speaks" is swell, though the ads are terrific (excepting your own) and the size type is not all that could be desired. And last, but not least, may I wish never-ending success to the SCIENCE FICTION LEAGUE? . . . . And now for the constructive (I hope) criticism:

First—(This is definitely directed against Paul.) After noticing the dissimilarity of the cover and the interior illustration for the "The Moon Devils" (a nifty story), and carefully comparing them from an artistic, scientific, and accuracy standpoint, I have come to the conclusion that Winter should have done the cover—same scene—and (if actually necessary) Paul should have been graciously allowed to do the interior drawing, though Winter handled it much more satisfactorily. And another thing, I don't like the design on the title page. The modest miss in the center is O.K. but the gentleman (?) on the left, the one with his arm around the young lady, has quite the *dizziest* nose I've ever seen in all my born days. The attitudes of all the readers in the design are either too stiff or ridiculous. And yet another point: the young idiot decorating the top of "The Reader Speaks" needs "Ten Concise Lessons on How to Get Rid of That Self-Conscious, Wide-Mouthed, Oratorial Pose."

I seem to have sort of run out of Irish confetti, but I'll probably deliver some more before I say adieu.

"The End of the Universe" is Milton Kaletsky's best work of art—I'm tempted to call it the best story in the April issue. As a rule, insect stories are rather boring, but "The Land of Mighty Insects" was a swelegant exception. "Xandulu" surpasses "The Moon Era," even, and "The Last Planet" is one grand story. Zerrin's poem is better than a lot of stories I have read and was a fitting climax to an all-star issue.

And by the by, your explanation of the coming of the continents is gratefully acknowledged.

I've introduced stf. to two of the boys in my class at school, and they took to it like—well, like a certain girl took to it two years ago. (She plays her hobby to the tune of ninety-two issues of science-fiction magazines, today—forty-seven of them being SCIENCE WONDER and WONDER STORIES.)

I am positive that "Exile of the Skies" is the best story you have published in three years, and a number of my friends agree with me.

Since one may do so in this emancipated day, I propose a toast to the authors, the editors, the artists, to WONDER STORIES!

VIRGINIA KIDD,
Catonsville, Md.

(We are glad that you see a constant improvement in WONDER STORIES. Our greatest reward for our efforts is the great number of letters that we receive stating this same thing.

We never noticed that the man on the contents page with his arm around the young lady had a dizzy nose. So sorry. We'll have to chose more handsome models in the future to pose for our art work. And as for the conceited editor at the head of "The Reader Speaks," we don't think your idea of getting rid of his self-consciousness would work. He's been sitting up there for over five years, you know, and is probably incurable.

Milton Kaletsky's short-short story made a favorable impression upon most of our readers. We hope to have more of his work for you in the future. We are doing our best to secure more short-shorts and print them as soon after acceptance as possible. We are very fussy about them, however, and accept very few that have not O. Henry endings.—EDITOR.)

An Appreciative Reader

Editor, WONDER STORIES:

I have been a reader of scientifiction magazines ever since the first copy of your former magazine came out in April, 1926, I believe it was. I have always linked your name with the best in this type of magazine. When I failed to see your name on the cover of your former magazine about the middle of 1929, I felt that there was something lacking. I hated to see you leave that publication because there seemed to be a marked falling off in the quality of the magazine after you left. Soon after, however, I noticed a new science-fiction magazine on the market and, sure enough, there was your name on the cover. I have been a constant reader of WONDER STORIES ever since and will take this opportunity to say that I am glad we still have a science-fiction magazine of the Gernsback quality on the market.

I thank you and wish you the success that the best in science-fiction magazines deserves.

E. O. ERICKSON,
Marengo, Ill.

(We appreciate your good word and loyalty to the Gernsback magazines. If all science-fiction readers felt the same way, our publishing problems would be much simplified!—EDITOR.)

More Readers' Letters

Editor, WONDER STORIES:

All the stories in the April issue were good (as usual), in fact, superlative, "the best," as the new cover banner implies. I like that new banner; keep it up. And a nice "Reader Speaks" this issue. The idea of having solid pages of the columns is much better than having one column sandwiched between ads.

And what a cover! Boy, it's certainly classy—a real stf. cover. This type is much better than that on the February or March issues.

Where's the sequel to "Beyond Pluto"? Huh?

Anyway, you're approaching your sixth anniversary, so you have my heartiest wishes for unparalleled success for many years to come; as Dana Gibson would have said, "In days to come," may you expand in your scope "even unto infinity." And also wishing the SCIENCE FICTION LEAGUE even as much success.

LEWIS F. TORRANCE.
Winfield, Kans.

(We intend to include more readers' letters per issue than in the old WONDER STORIES—as you perhaps notice we have been doing lately.

Thanks also for your birthday congratulations. As you will see by the SCIENCE FICTION LEAGUE department in this issue, it has gone over much better than we expected. We urge all enthusiastic fans to join. —EDITOR.)

A Veteran Fan

Editor, WONDER STORIES:

Excuse this letter's being written on Sunday, but I just had to write and tell you for once, how and why and what kind of an impression your WONDERful magazine makes upon me.

I have been a constant reader of your publications since the days of "Dr. Hackensaw's Secrets," "Tarrano the Conqueror," "Into the Fourth Dimension," and that sheerest of all science-fiction stories "The Metal Emperor," by A. Merritt. Also Wells's "New Accelerator," Wertenbaker's "The Man from the Atom," and Verne's memorable "Off on a Comet."

Until now "silence" was "leaden" so I ask if I may give my views an airing in your estimable "The Reader Speaks" column? Thank you.

First of all, I finished your excellent April issue in exactly nine hours and forty-five minutes (including everything). The best story in the issue? Well, now—that's mighty hard to say. However, I should think the honors are all with Jack Williamson's "Xandulu," and A. C. Stimson's "The Land of Mighty Insects." Next place is taken by R. F. Starzl's "The Last Planet." Third place goes to "The Menace from Space" by John Edwards, and—but why enumerate the rest? Some of your readers will dispute what I've said so far anyway.

About the covers: "Some like 'em hot, some like 'em cold—" By all means keep Paul on the cover. While there is a certain amount of monotony in his dressed-up figures, he is, by all means, the aristocrat of science-fiction illustrators. His cover for April is superb.

If I remember correctly, you adopted the small size once before, about the time "The City of Singing Flame" was published. Now that you have readopted (?) it, please keep it. I would much prefer a size 8" x 11" with cloth binding; but that's so old-fashioned— Your present small size receives my vote of approval.

I consider the best story that has appeared in WONDER to be "The Time Stream" by Taine. How about another by Mr. Taine in the near future?

But for the sheerest, downright, out-and-out science-fiction story, I unhesitatingly choose (stated above) "The Metal Emperor." For transcendental vision, superlative invention, and cosmic imagination there has never been an author who can surpass Merritt. And yet—he adheres strictly to well-known facts and theories. By the way, Mr. Gernsback, will you try, sometime, to secure the reprint rights of the story "The Face in the Abyss" and its sequel? The former you promised us the sequel to when you were the editor of the magazine in which it appeared in reprint.

While I am about it, I notice that one reader, a Mr. Lybeck, suggests that you revive the QUARTERLY and use it for reprints. Your comment following his letter gives a vague hint of—something. Dare we base our hopes upon it? If we may, then let me be the first to congratulate you. And if you do, by all means reprint Dr. Keller's masterpiece, "The Conquerors," and Clark Ashton Smith's "The City of Singing Flame"—also Dr. Keller's "The Human Termites."

I noticed some time ago a letter from two would-be magazine reformers. In it they stated clearly and concisely that Clark A. Smith's "The Timeless World" was so much "buncomb." Could I see these two I would unhesitatingly take them to task for such a —well—foolish statement. Clark Ashton Smith happens to be one of my favorites, and I sincerely hope to see more of his work gracing your pages in the very near future.

By now you have undoubtedly received a flood of protests for printing "The Brain-Eaters of Pluto." If this be the case, let my approval of that little story help offset the overbalanced amount of criticisms. That story contained spice. y como!—as the Spaniards would say. I hope you will print more like it, and, also, more like "The End of Tyme." For those who don't like the "variety," let them find something else to amuse, or harass, their minds with—and, goodness knows, they'll find plenty else in your pages. Anyone who disputes a few pages of nonsense is not being very broad-minded.

I notice by a great number of the letters you receive, that any number of your readers would like to write the type of science-fiction you use. Here's a suggestion: why not print a small magazine; say—to sell for a dime, and in it publish the stories which are just about good enough—but not quite—to go into WONDER? There are undoubtedly any number of good stories that come into your offices and have to be rejected for some mere slip of technique. This suggestion (while not very practical) would be met with approval by many of your readers, I feel sure.

I myself have a large collection of rejection slips that would (would *not*, too) be envied by a large number of science-fiction authors.

To get back to stories, the best you ever published in AIR WONDER was "The Ark of the Covenant" by Victor MacClure; and for the QUARTERLY, "The Shot into Infinity" by Otto Willi Gail. Of course, for WONDER, "The Time Stream."

The best story you published in your previous publication was "The Moon Pool," and in your old SCIENCE AND INVENTION, "The Metal Emperor." Why not secure a third serial reprint right, and reprint it in EVERYDAY SCIENCE AND MECHANICS? The reason I have asked you to secure the reprint rights to the sequel of "The Face in the Abyss" is mainly to have Paul's illustrations; and, too, it is of such a scientific supremacy that it really belongs in your pages.

Well, this letter seems to be getting longer by the minute. You are no doubt getting peeved at this long-winded epistle, so I will bring it to a close. If you should print this, however, I would like a friend of mine to see it, and let me place this aside here:

(Edgar H., Toledo, Ohio: Have lost your address. Sorry! If you see this, please write. Joe.)

And so I leave you with my best wishes for your continued success, past, present, and future, and end this in Keller style:

"With that he returned to another decade of silence."

JOSEPH HATCH.
Leavenworth, Kans.

(We intend to keep Paul on the cover. He has illustrated every cover of WONDER STORIES that has ever been published, over sixty, and there has been very little complaint about his work.

At the present time, the opinions on "The Brain-Eaters of Pluto" is divided about 50-50. A sequel to "The End of Tyme" has been written and is being prepared for publication. Watch for it—"The Return of Tyme."—EDITOR.)

A Knocker of Knockers

Editor, WONDER STORIES:

For five long years I have been a reader of scientific-fiction of all types, but especially WONDER STORIES. I have not missed an issue in all that time. Naturally, I have seen a number of changes in our magazine in that length of time. I have seen the title changed from SCIENCE WONDER STORIES, to the present one of WONDER STORIES. I have seen the abolition of our old AIR WONDER STORIES. I have seen the arguments rage at battle-heat and the brickbats fly thick and fast in "The Reader Speaks." And all this time I have stood quietly by and never attempted to crash the sacred portals of this so-sacred department. But here I come, at last. Get the wastebasket ready.

No, I'm not going to start throwing brickbats. So, it is unnecessary for you to turn pale and start looking for a place of concealment. I have only one objection to make. Can't we get along without so many "sexy" advertisements? However, if it is necessary, I can forgive you this. The magazine as a whole is so good that I think we readers should overlook a small item like this.

I am very glad you have returned to the old size. It makes the magazine much more convenient to carry about in one's pocket, and it fits into the shelves of the library much more nicely.

What's all this argument about Paul? Lay off him, you muga! He is the favorite of the majority, so what are you kicking him for? Although, I will have to do

agree with Mr. Raymond Peel Marlella of Philadelphia, who says that he is in favor of an all-Paul illustrated issue forever. I think we should give some of the other artists a chance. Might uncover a genius. What's the matter with Winter? Nothing! He is almost as good as Paul.

Have just finished reading the April issue. I believe it is the best yet. Seems to me the magazine is improving with each issue. "The Land of Mighty Insects" by A. C. Stimson was fine. What about a sequel, Mr. Stimson? "Xandulu" by Jack Williamson is turning out nicely. But it is not as good as "The Exile of the Skies." Now, there was a wonderful story—one of the best I have ever read. More power to Mr. R. Vaughan. Hope we will be hearing more from him soon.

"The Last Planet" and "The Menace from Space" were both good, especially the latter. This is the type of story I enjoy the best.

No, as I said before, I'm not going to throw any brickbats. All I have to offer is praise. I can't praise WONDER STORIES too much. Just take a look at some of the stories of 1933. "The Lunar Consul," "Revolt of the Scientists," "The Man Who Awoke," "Monsters of Callisto," "Evolution Satellite," "Men of the Dark Comets," "The Eternal Dictator," "Vengeance of a Scientist," "The Call of the Mech-Men," "Death Between the Planets," "The Man with X-Ray Eyes," "Through the Einstein Line," etc. I could go on naming them for an hour. Now, if anyone can read this almost-unlimited array of extraordinary stories and then kick this magazine, he should have his head examined.

So, when all is said and done, I think WONDER STORIES is the best magazine on the market, and I have read them all. But if this letter doesn't find its way into the wastebasket, that will be the "greatest wonder" of them all.

D. R. WELCH,
Austin, Tex.

(We cannot see why some of our readers object to what you call "sexy" advertisements. Everyone of them that appears in WONDER STORIES is of a thoroughly scientific nature—either educational or medicinal. We accept no advertisements of a questionable nature.

We notice that you are a "knocker of knockers." Many of those that write us unfavorable letters do so for our own good—constructive criticism. Not all of them are cranks. Mr. Kaletsky, for instance, is eternally dunning us for not having enough science in our stories. His letters are always welcome, for he knows what he's talking about, though he does not realize that other readers like the stories for their imaginative qualities rather than the cold-fact science in them.—EDITOR.)

"A Poor, Bloody Journalist"

Editor, WONDER STORIES:

The writer of this letter is an English journalist, condemned to exile (!) in the United States, and a confirmed WONDER STORIES addict. In fact, such a hopeless "prophetic fiction" fan is he that he is unable to confine himself to WONDER STORIES, but avidly devours your two hated rivals as well! Of course, if WONDER STORIES were three times bigger than it is at present, such base conduct would not be necessary, but as it is . . . .

Not wishing to join himself to the ranks of short-sighted, second-rate brickbat casters who seem to assail your correspondence column, he will confine himself merely to the insidious remark that, as a writer himself, he is only too well aware of the limits of poor human imagination; and that, Lord knows, it is hard enough to prophesy the ordinary, everyday actions of contemporary *homo sap*, let alone what is likely to transpire on Antares in the year 20,000! However, more power to your authors, says he, for his appetite is insatiable!

As I am only a poor, bloody journalist, I am hoping that you will find a corner tucked away somewhere for this letter in "The Reader Speaks" column.

I will close with a suggestion for a motto for WONDER STORIES, which has always seemed to me to be particularly apt: *Mens agitat molem!*

GUY H. L. WERNHAM
San Francisco, Calif.

(Though the human imagination has a limit, as you say, we allow our authors to use theirs as freely as they wish, so long as they remain logical. Logic distinguishes science-fiction from the fairy tale.

We interpret your last words as meaning "mind can move a mountain."—EDITOR.)

Our Scientific Articles

Editor, WONDER STORIES:

The May issue of WONDER STORIES appears to be better even than last month's. I missed, however, the scientific articles and the editorial, but I suppose the announcement crowded them out of the issue. In the "Science Questions and Answers Department," your answer to the question on satellites was very good. Keep up the good work in the magazine and in the SCIENCE FICTION LEAGUE.

ROBERT HART,
Wethersfield, Conn.

(We use our short scientific news items only as fillers, which means that three or four may appear in one issue and none in the next, depending upon the amount of left-over space. You will notice that most of these items allow great room for the imagination and some would be good bases for science-fiction stories, if any of our authors take the hint. —EDITOR.)

Roses For Williamson

Editor, WONDER STORIES:

In response to the call of "Xandulu," I am writing this letter. Jack Williamson has scored another hit which is helping to immortalize him. Another jewel in his starry crown. First "The Green Girl," then "The Stone from the Green Star," and now . . . . "Xandulu." "Xandulu" is by far the best serial published in your magazine for many months. In fact the only serial rivaling it in literary power is the one and only "Time Stream" from the pen of the illustrious John Taine. The stories had been so mediocre of late that I had just about given up the thought of setting my views before you when the March issue dropped in my lap.

The best story of the issue was "Xandulu." Running second we have the unusual "Exile of the Skies" by Richard Vaughan. Mr. Vaughan is one of your best. "The Brain-Eaters of Pluto" offered some sparkling diversion and I should like to see more of this type of story in the magazine. More power to you, Mr. Sterling. "Caverns of Horror" by the inimitable Mr. Manning was quite good. Back to "Xandulu." I have but one criticism to offer. More sadness should have been injected into the ending to fit the character of the rest of the story. The final instalment was so gripping that I could not put it down before I finished, even in bed. And that is saying something. Through his splendid efforts, Jack Williamson has placed himself along with the great in science-fiction authors.

Please go back to the large size. I don't like my *special* magazine to even look like a dime detective story. You have done incalculable injury to the magazine. When at times the stories were not so good, I have borne with you, but now you have slapped the face of every self-respecting scientifiction fan. Promise that as soon as possible you will go back to the normal size and also put out a quarterly and an annual.

Mr. Gernsback, and you too, Mr. Lasser, are both very intelligent men. I have followed the former in radio and other scientific fields for quite a while. While I do not know so much about Mr. Lasser, I do know that if he is an associate of Mr. Gernsback, he is all right. Therefore, whatever put it into either one of your heads to cut out the stories sent to you by that peer of all literary scientifiction authors, Clark Ashton Smith? Some people, who don't know their alphabet even, write in and say that Mr. Smith's stories have no place in this magazine. They are so used to reading the trash turned out by *every old magazine* that they are unable to recognize true talent when they see it. Probably one of them came across his name in a magazine of weird fiction. Then at once, half the time without reading his stories, they brand them as weird fiction not belonging in our mag. I appeal to your intelligence to disregard such advice and not make the mistake of trying to please everybody. Give us Clark Ashton Smith. He has written the most beautiful stories that you publish.

The editor of a certain magazine (I am not mentioning any names) has declared that they do not believe in the possibility of space-travel. Things have come to a pretty pass when the editor of a reputable science-fiction magazine makes such a statement. Don't you think so?

The best authors in science-fiction to-day, as I rate them, are as follows: A. Merritt, H. G. Wells, Edward E. Smith, John W. Campbell, Jr., John Taine, Jack Williamson, A. Hyatt Verrill, Stanton A. Coblentz, and Clark Ashton Smith. What do you think of this list?

Can't you get some good book-length novels from some of these authors I have named? The best authors have disappeared from your pages. What has happened to A. Merritt? Why does he not write any more? A brain such as his should not stop giving forth masterpieces.

I am not satisfied with this letter but perhaps my next will be better.

DAY GEE,
East St. Louis, Ill.

(We are glad that you liked Jack Williamson's "Xandulu" so much. We consider him a fine writer.

We believe that we have at last reached a conclusion concerning the size of the magazine. After years of experimentation, we find the small pulp size the most satisfactory. We have more readers by far in this size than in the large—and that counts.

Mr. Lasser has not been with us since July, 1933. We agree with you that Clark Ashton Smith's stories that we have published were not out of place in WONDER STORIES.—EDITOR.)

Improvements

Editor, WONDER STORIES:

For over two years I've read WONDER STORIES and have followed your stories and articles with great interest. Your magazine is the only one of its kind for which I have had a deep interest. The stories have a peculiar fascination for me which compels me to sit down and read them by the hour.

I have just finished reading your May issue. I believe you have there the best, if not one of the best, collection of stories that you have ever had in any of your previous issues. I find it very hard to classify them. They were all very good. But in your April issue I find that "The Moon Devils" and "The Last Planet" take the prize. Keep up the good work, it's food for thought.

I don't suppose you mind a few friendly suggestions from your readers, so I'm going to make some. I have heard several people state that your magazine was just like all the rest, "blood and thunder" type. I know it isn't. But it is hard to convince such people that it isn't. In a way they are right, though. It is the appearance of it that sets them against it. Now I'm not saying that the illustrations are poor; they aren't. In fact, each one is as good as any illustration in any magazine, if not better. The stories are like gems with poor settings; that goes for the illustrations, too. I have a high regard for you, Mr. Gernsback, and I believe you very competent as I have read many of your articles. Therefore I think that you will see what I mean. Now I guarantee that if you take that magazine, leaving none of your stories, articles, or illustrations altered, and use a little better grade of paper, cut your edges evenly (I believe that this point has already been brought up by one of your readers) and once in a while publish one of H. G. Wells's stories, you can offset this antagonistic feeling and greatly increase your number of sales. Such an improvement ought to set you so far above your competitors that they will give up entirely.

Some of your new writers are good; they show ability. Keep them on; I like to see their ideas expressed in stories.

STEPHEN R. TUCKER,
Wallingford, Conn.

(You say that you believe one of our readers has already asked for even edges. If you will look through back issues of this magazine, you will see that there have been several requests for this improvement. The experiment of good (super) paper and cut edges (in the large size) came near ruining us. We lost thirty-five per cent of our readers! It is a very expensive proposition, that is why most pulp magazines do not do this. However, we intend, in time, to make several improvements. We believe that WONDER STORIES can easily be distinguished from other pulps, though it is the same size and format. We refer to the modern make-up. We have an arrangement distinctly different from all other magazines, and we now are beginning to notice other magazines starting to copy little details here and there. "Imitation is the sincerest form of flattery." Anyone, upon opening a copy of WONDER STORIES can easily see that it is not "just another pulp."—EDITOR.)

Our Editorials

Editor, WONDER STORIES:

Have just finished reading the March issue and did enjoy it much—from cover to cover. An A-1 issue I might say.

Paul's cover, a scene from the story "Children of the Ray" is good, though he could have made better. However, he did excellent work on the cover of the August, 1933, number. Please give him a rest. Let Winter do the work for a while.

Speaking of this new artist, he has the talent and imagination needed for science-fiction stories. Let him stay for good. His illustration of "The Sublime Vigil" was a masterpiece and something reminiscent of Hoffman's "Christ in Gethsemane."

A few weeks before the March issue arrived here, I was assigned to write something about radio waves for our class work in physics. I had to look over my old copies of WONDER STORIES about radio waves but could not find anything to my liking, so I got some information from the *Encyclopedia Britannica* and made my own "Wonders of Radio Waves." After I submitted my report, two days later the March issue arrived with your fine editorial on the same subject. If it had arrived earlier, I mean the magazine, it could have saved me all the trouble. Your editorials are enlightening, instructing, and I use to let my classmates read them.

"Xandulu" opens with an interesting theme. Am anxiously waiting for the next part.

"The Brain-Eaters of Pluto"—well, well—give us stories of this type once in a while, but not too often, mind you. If I am not very much mistaken, "claustrophobia" is a sickness, a horror, of being enclosed in small space. Right? And Paul's illustration of the story . . . . (I never knew he had a good sense of humor).

"Children of the Ray"—fair.

"Martian Madness"—fair.

"Caverns of Horror"—fine. What about a sequel?

"The Literary Corkscrew"—interesting. More of Dr. Keller's stories.

"The Exile of the Skies"—an outstanding novel, if not really a tremendous one. A hit since "Exiles of the Moon," "Time Stream," etc. Congratulations to Mr. Vaughan. Another corking serial from this author, please.

Your 'space-fillers" are good.

"To a Space-ship"—a poem, fine.

"Passing of the Planets—Luna"—a poem, with its magnificent theme, is, I think, the outstanding feature of the whole magazine.

Please tell Mr. Clark Ashton Smith to write a long serial about Earthmen (not ethereal entities) in grips with weird horrors; in realms of celestial beauty; Earthmen in fierce hatred, in exultant joy; Earthmen involved in mysterious emotions; in adventures, wars; Earthmen dealing with life and death, etc., etc. . . . . In other words, a real science-fiction story that only the imagination of Mr. Smith can picture. And let said Terrestrials stay on old terra firma.

J. R. AYCO,
Manila, P. I.

(We find Winter's work very satisfactory and intend to let him continue drawing for us, as long as you, the readers, like his work. However, Paul will continue to do the covers.

We are glad to see that our editorials are helpful to you in school. Many of our readers have declared that this page alone is worth the price of the magazine. The Editor always uses themes that will interest science-fiction fans—ideas that allow the imagination to delve deeper into the subject and explore its possibilities.—EDITOR.)

Errors in WONDER STORIES

Editor, WONDER STORIES:

Although every issue of WONDER STORIES since December, 1933, has shown a decided improvement over the preceding month, the April issue has shown a slight come-down in veracity. The stories themselves were up to standard, but a few mistakes in the stories take much of the enjoyment from them. I have been reading your magazine long enough to know that you welcome any corrections or suggestions sent you. Therefore, I will list the faults that I find in this issue according to the way the stories appear in the magazine.

In the first story, "The Land of Mighty Insects" by A. C. Stimson, the author declares that the expedition took place in June and July and later says that the land would soon be swallowed up in the Arctic night. According to the date of the expedition's taking place, it would be in the midst of winter and the polar night, June 21st, being on the day on which the sun does not reach the south pole. Then again he says that George Tolliver broke some bones in his foot on July 12th, but on the 16th he was entirely

well. It seems to me that it would take much longer than that for a broken bone to mend, let alone be able to walk on it. What I also cannot understand is why the expedition would take a machine gun equipped plane and a veritable arsenal merely on a polar exploring trip.

In the second story, "The Moon Devils" by John Beynon Harris, the author says that there was a little air on the moon but not enough to sustain life except in some deep craters. According to my deductions, air on the dark side of the moon would freeze and fall to the surface of the satellite, thus creating a vacuum on the dark part. On the sunny side, the air would expand and rush to fill the vacuum on the dark side, and would be frozen in turn. Thus the air would be deposited on the dark side of the moon while not a vestige remained on the sunny side.

The author also says that the moon people froze as darkness came on. Why then would they not freeze when they were in the shade of the cavern or why would they not die of the heat in the sunlight? The inside illustration also varies. The men in the story were putting metal shields over the windows so that the air would not rush out where they were broken, yet the artist pictures them putting metal bars with spaces six inches wide between them across the windows.

In the "Menace from Space" by John Edwards, the author explained that the plants died when all the green gas was gone because the plants fed on the gas. Why, then, did the plants grow before the gas reached the earth?

The rest of the stories, as far as I can see, are without flaws. If the first three were the same way, I couldn't ask for a better collection of stories or a better made-up magazine; in fact, I would be forced to write and compliment you on the issue. As it is, I know that the mistakes were not intentional and that the company was doing its best to make it an ideal issue and, since it is a very human trait to make mistakes or to overlook them, the guilty ones are only showing that they are human. I shall always remember this issue for the fresh ideas and enjoyment it has brought me and sincerely hope that each succeeding issue will be as good if not better than the April one.

JACK SCHALLER,
Erie, Pa.

(There is an old saying: "To err is human," and editors are no exception. A mistake is bound to creep in here or there, despite five or six proof-readings, though we take every care to see that they are very few in number. Also, some of the things you call "mistakes" in the April issue are really only statements that you challenge and about which you have conflicting theories, though theirs are just as logical. A great many science-fiction stories are filled with logical theories that no one can doubt, for no one knows the truth about many of Nature's mysteries, though they may personally *believe* differently. Thus, for instance, most scientists agree that air, very thin air, exists in the lower regions of the moon.

Your last few lines, however, show us that you greatly enjoyed the April issue despite the mistakes you mention.—EDITOR.)

Winter's Illustrations

Editor, WONDER STORIES:

I will start this letter by quoting a tired pedestrian, who, slowly footing his way up the street, passed yours truly who was so engrossed in reading "Xandulu" as to be almost totally unaware of all around him. I was brought to my senses (O yeah? What senses?) by his words, "Say, that cover's pretty swell!" That just goes to show the attractiveness and splendor of the May WONDER STORIES cover. It was a great piece of work.

Upon first seeing the announcement of the SCIENCE FICTION LEAGUE, I immediately made out two coupons and sent them to ye good old address, 98-98 Park Place. I am sure the venture will be a success. More power to it.

Now for the stories:

"Traders in Treasures" was very good, though I expected entirely different from old Eppy. It's getting so bad that every night I expect a news-flash from Byrd, saying that he discovered a lost race, or subterranean world, came upon warm lands, etc., etc., and etc. What a contrast to "Snookian" humor.

I was glad to see Colladay back with "Earthspot." Very good story and illustration. Publish more stories by this author.

"The Tone Machine" was all right, not considering the senility of the plot.

"The Green Cloud of Space" was very, very good. It gripped and held me till the very end, which was of good quality and very rare. The story strengthened my opinion of Mr. Binder. Hurry his next story. By the way, it's almost in style now to have clouds from the void attack the Earth, isn't it?

The illustrations for the two last stories mentioned were the best I think Winter has drawn so far. In judging them, we must realize that the drawings were *commonplace scenes*. Nothing unusual about them. Just the same, they were very good. Winter could have become "modernized" and drawn some streamlined cars.

Coming to "Xandulu," I must say that it was characteristic of Williamson, an excellent story. I wasn't the least bit disappointed. Williamson has the knack of making things so realistic, and yet so alien to our world. He can always be relied upon to produce something unusual. Illustration O.K.

But tell me, when is Keller's "Doorbell" going to see print? The anxiety is terrific.

RAYMOND PEEL MARIELLA,
Philadelphia, Pa.

(It seems that "old Eppy" can really write something sensible once in a while, as shown by "Traders in Treasures," which, by the way, has been highly praised. Let's hope he has his lucid moments again some time.

You will notice that most of the subjects we give Winter to illustrate are based on figure-work. We find him well adapted to this type of drawing.

"The Doorbell" by David H. Keller, M.D., appeared in our June issue. Watch for other stories by him in the near future.

Notice that we are now located at 99 Hudson St. —EDITOR.)

The Science Fiction League

Editor, WONDER STORIES:

Have just completed reading the May issue of W. S. It was fine. First there was the wonderful cover. This is the kind of work Paul does best. Then there was the information concerning the SCIENCE FICTION LEAGUE. I think it is a marvelous idea. Without doubt, the time has come when science-fiction readers should be banded together in a compact group. It will greatly facilitate the spreading of the gospel of scientific literature. I have already sent in my application for membership, and I suppose (if I'm elected) I shall be getting my certificate soon.

As for the stories, they will probably average BB, which, as you know from the letter I sent you a few days ago, means fine. Also the "Science Questions and Answers" column was very interesting, particularly the chart of the satellites of the various planets.

You make no mention of the story "The Doorbell" by Doctor Keller. Have you dropped it, or if not, when will it be published?

In closing I wish to add my voice to those clamoring for reprints. While I have read most of the old classics, I believe the great majority of science-fiction fans are ones who have been converted to it in the last three or four years, and consequently are not acquainted with the works of Wells, Servies, Merritt, etc.

ROY F. PHILLIPS,
Martins Ferry, Ohio

(We are glad to have you as a member of the SCIENCE FICTION LEAGUE. You have the honor of being one of the very first—number forty-two [42].

Dr. Keller's "The Doorbell" has already been published.—EDITOR.)

An Early Member of the SFL

Editor, WONDER STORIES:

Alas! Mr. Torrance beat me to it. I was just about to accuse Mr. Gernsback of being Epaminondas T. Snooks, D.T.G., when he came along ahead of me.

Although not being an artist, might I suggest a reason as to the difference of opinion over Paul's and Winter's work? If you glance over their illustrations, you will find that Paul shades his drawings to obtain the effect of reality while Winter uses lines. While speaking of illustrations, I find two slip-ups in "The Moon Devils." In the story, the sea bottom where the space-ship landed was covered with sand, while on the cover there is nothing but rock. The other slip-up was that Winter's lunar men did not have large enough chests.

I don't think the covers are any more flashy than they have been in the past and there certainly is an improvement in the coloring.

(Continued on page 251)

Good News for Members of the
SCIENCE FICTION LEAGUE

THE following list of essentials has been prepared for members of the SCIENCE FICTION LEAGUE by the officers at Headquarters.

A FEW WORDS AS TO THE PURPOSE OF THE LEAGUE

The SCIENCE FICTION LEAGUE was founded in February, 1934. The Executive Directors are as follows

Forrest J. Ackerman, Eando Binder, Jack Darrow, Edmond Hamilton, David H. Keller, M.D., P. Schuyler Miller, Clark Ashton Smith, and R. F. Starzl. Hugo Gernsback, Executive Secretary, Charles D. Hornig, Assistant Secretary.

The SCIENCE FICTION LEAGUE is a membership organization for the promotion of science fiction. There are no dues, no fees, no initiations, in connection with the LEAGUE. No one makes any money from it, no one derives any salary. The only income which the LEAGUE has is from its membership essentials. A pamphlet setting forth the LEAGUE'S numerous aspirations and purposes will be sent to anyone on receipt of a 3c stamp to cover postage.

One of the purposes of the SCIENCE FICTION LEAGUE is to enhance the popularity of science fiction, to increase the number of its loyal followers by converting potential advocates to the cause. To this end, the SCIENCE FICTION LEAGUE supplies members with membership letterheads, envelopes, lapel buttons, and other essentials. As soon as you are enrolled as a member, a beautiful certificate with the LEAGUE'S seal will be sent to you, providing 15c in stamps or coin is sent for mailing and handling charges. However, this will be given free to all those enrolled members who find it possible to call personally at Headquarters for it.

Another consideration which greatly benefits members is that they are entitled to preferential discounts when buying science fiction books from numerous firms who have agreed to allow lower prices to all SCIENCE FICTION LEAGUE members. The book publishers realize that, the more fervid fans there are to boost science fiction, the more business will result therefrom; and a goodly portion of the publishing business is willing, for this reason, to assist SCIENCE FICTION LEAGUE members in increasing their science fiction collections by securing the latest books of this type at discounted prices.

SCIENCE FICTION ESSENTIALS LISTED HERE SOLD ONLY TO SCIENCE FICTION LEAGUE MEMBERS

All the essentials listed on this page are never sold to outsiders. They cannot be bought by anyone unless he has already enrolled as one of the members of the SCIENCE FICTION LEAGUE or signs the blank on this page (which automatically enrolls him as a member, always provided that he is a science fiction enthusiast).

If, therefore, you order any of the science fiction essentials without filling out the blank, or a facsimile (unless you are already enrolled as a LEAGUE member) your money will be returned to you.

Inasmuch as the LEAGUE is international, it makes no difference whether you are a citizen of the United States or any other country. The LEAGUE is open to all.

LEAGUE LETTERHEADS

A beautiful letterhead has been especially designed for members' correspondence. It is the official letterhead for all members of the LEAGUE and is invaluable when it becomes necessary to correspond with other members or with Headquarters.

A—SCIENCE FICTION LEAGUE letterheads, per 100.....Prepaid 50c

LEAGUE ENVELOPES

So that letters mailed to members of the LEAGUE can be immediately recognized, special envelopes that harmonize with the letterheads have been printed.

B—SCIENCE FICTION LEAGUE envelopes, per 100.....Prepaid 50c

LEAGUE SEALS

These seals, or stickers, are printed in three colors and measure 1¼" in diameter, and are gummed on one side. They are used by members to affix to stationery, letterheads, envelopes, postal cards and the like. The seals signify that you are a member of the SCIENCE FICTION LEAGUE. Sold in lots of 25's or multiples thereof.

C—SCIENCE FICTION LEAGUE seals, per 25.....Prepaid 15c

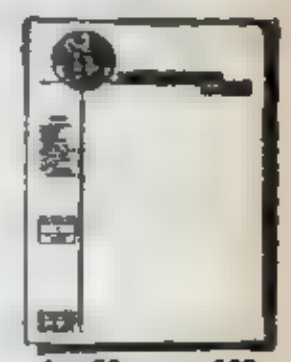
LEAGUE LAPEL BUTTON

This beautiful button is made in hard enamel in four colors—red, white, blue and gold. It measures ⅞" in diameter. By wearing this button, other members will recognize you. Many friends will perhaps also want to join the LEAGUE. The button must be seen to be appreciated.

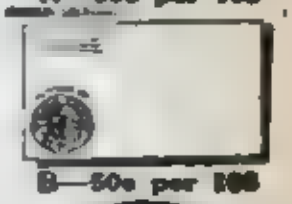
D—SCIENCE FICTION LEAGUE lapel button.....Prepaid 35c

DD—SCIENCE FICTION LEAGUE lapel button, like the one described above, but in solid gold.....Prepaid $2.50

If you do not wish to mutilate this magazine, any number of applications will be supplied upon request.



A—50c per 100



B—50c per 100

C—15c for 25

D—35c each

SCIENCE FICTION LEAGUE, 99 Hudson Street, New York, N.Y.

Application for Membership
SCIENCE FICTION LEAGUE

SCIENCE FICTION LEAGUE, 99 Hudson Street, New York, N. Y.

I, the undersigned, herewith desire to apply for membership in the SCIENCE FICTION LEAGUE. In joining the LEAGUE, I understand that I am not assessed for membership and that there are no dues and no fees of any kind. I pledge myself to abide by all the rules and regulations of the SCIENCE FICTION LEAGUE, which rules you are to send me on receipt of this application.

I belong to the following class (put an X in correct space): ( ) Professional; ( ) Business; ( ) Student; ( ) .. .. (Please print information)

Name .....Age.....

Address.....

City and State.....

Country. .... Date.....

I enclose 15c, for postage and handling, for my Membership Certificate.

SCIENCE FICTION LEAGUE, 99 Hudson Street, New York, N. Y.
Gentlemen:

[ ] I am already enrolled in the SCIENCE FICTION LEAGUE.
[ ] I am a new member and attach my application to this coupon.

Please send me the following SCIENCE FICTION LEAGUE essentials listed in this advertisement. (Please print information)

.....

.....

....

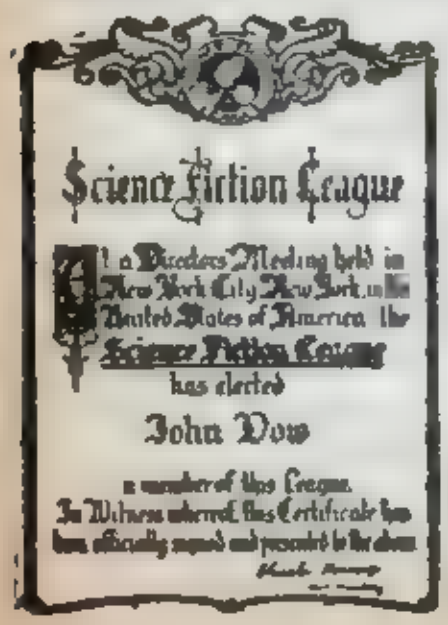
for which I enclose $ ..... herewith.

(The LEAGUE accepts money orders, cash or new U. S. stamps in any denomination. Register cash or stamps.)

Name.....

Address.....

City .. .. State..... WS-634


Science Fiction League
At a Directors Meeting held in New York City, New York, in the United States of America, the Science Fiction League has elected
John Doe
a member of the League.
In Witness whereof this Certificate has been officially signed and presented to the above

FREE CERTIFICATE

To the left is an illustration of the certificate provided all members of the SCIENCE FICTION LEAGUE. It is sent to all members upon receipt of 15c in stamps to cover mail charges.

WONDER STORIES is the voice of the SCIENCE FICTION LEAGUE a monthly department appears in the magazine.

Announcing!

The SCIENCE-FICTION SWAP COLUMN

for the benefit of our readers who wish to dispose of or secure science-fiction books and magazines.

We have found that many science-fiction enthusiasts wish to trade, buy, or sell material of this nature, but cannot afford to pay the 10c a word rate of our "Classified Advertisements" column.

Therefore, beginning in this issue, on page 254, we are inaugurating

The SCIENCE-FICTION SWAP COLUMN

The advertising rates will be only 2c per word. Here is your opportunity to increase your science-fiction collection. Now you can secure those classics that you have been looking for so long in vain—or dispose of them to others if you wish to put them on sale.

There will be three divisions of

The SCIENCE-FICTION SWAP COLUMN

—one entitled "FOR SALE," the second, "WANTED." and the third, "EXCHANGE," Take advantage of these three departments. Now that you can place an advertisement for only 2c per word, you cannot afford to miss the opportunities that are awaiting you. Cash must accompany all orders. No discounts. Advertisements to appear in the August issue must be in our hands no later than June fourth. Every group of letters, including the initials in the name and address, will count as one word.

Send all advertisements to

WONDER STORIES
Swap Editor
99 Hudson Street, New York, N. Y.

SCIENCE QUESTIONS AND ANSWERS

(Continued from page 240)

Our Shrinking Earth

Editor, SCIENCE QUESTIONS AND ANSWERS:

I read in one of your recent stories that the universe is "running down." Is this noticeable on our earth, or is it too gradual to be felt, or does it only affect stars? I would like to know more about this

WILLIAM MCNAMEE.
Eveready, Pa.

(What our author meant by "the universe running down" was that its energy is gradually becoming less, though it is a very slow process and the length of time that it will take to become nothing is too far in the future to contemplate, according to this theory. But, it is only a theory, and there are other contradictory ones which are just as convincing.

According to Professor Ernest Jaenecke, the earth is losing its heat into space, though this perhaps has no connection with the general running-down of the universe. He declares that about ten feet of the earth's inner molten rock solidifies each year and that their thickness is 1/60 of an inch less. Consequently, the earth is shrinking, and in a thousand years, our world will have lost five inches of its diameter! This shrinking is what causes the slippings in the interior of the earth which we register as earthquakes. Undoubtedly, if the interior were remaining unchanged, there would be no volcanoes or earthquakes, which helps to prove Professor Jaenecke's theory.—EDITOR.)

Microscopy

Editor, SCIENCE QUESTIONS AND ANSWERS:

I intend to buy a microscope and I would like to know something about how to use it. I have always enjoyed the thought of peering into things that we cannot see with our naked eyes. I will appreciate anything that you will tell me about microscopy in your interesting column.

B. BRADLEY BURNSIDE.
Atlantic City, N. J.

(Microscopy is a very interesting subject and too technical to go into in very great detail in this department, though a magazine devoted entirely to the subject is about to be published and you will find many books devoted to it in any public library.

Objects are observed under microscopes with "slides"—small, flat glass pieces upon which the matter to be examined is placed. Most material is put under a drop of water, though crystals are observed dry on the slide. Three of the most interesting things for the beginner to study are crystallizing salt, plant cells, and the web between the toes of a frog. Crystallizing salt gives one of the most beautiful and colorful sights that can be seen under the microscope. In aquatic plants you can see the "plasma flow," a most interesting spectacle which clearly shows the method of cell rejuvenation. The blood flow can be seen through the thin web in a frog's foot or the tail of a goldfish.

The birth of the microscope can be traced back directly to the thirteenth century when eyeglasses were discovered, though the ancient Romans had known that a glass ball filled with water had magnifying qualities. The simple microscope is a combination of two or more lenses put closely together. Today such instruments are used for dissecting where a large field is required.

You will find, when you buy your microscope, that full directions for its use are given with most of them. A microscope is like a door into another, alien world. It shows us the secrets of nature and the marvels of the unseen universe.—EDITOR.)

Become a Member of the
SCIENCE FICTION LEAGUE
See Page 249 For Details

THE READER SPEAKS

(Continued from page 248)

In a recent issue of a rival magazine, I noticed a story by a "Nat Schachner." If he is Nathan Schachner, he must be a second "Henry Le Kler," for it was terrible! I have become interested in the SCIENCE FICTION LEAGUE and am anxiously awaiting the next issue. Ye Editors have been fine except for an error on Page 936 of the April, 1934, issue, and the editorials a la Gernsback are perfect. Let's hear more from D. D. Sharp.

JAMES POWERS,
Chicago, Ill.

(Once in a while, Paul's cover story has an inside illustration by Winter or another artist, and they differ a little in interpretation. Though we try to avoid this as far as possible, there are slight variations which cannot be helped. We notice that you, like Mr. Phillips, are one of the very first members of the SCIENCE FICTION LEAGUE, being number forty-nine [49]. Thank you for your co-operation.

Would you kindly inform us as to the nature of the error that we made on Page 936 of our April issue? —EDITOR.)

The Nature of Jupiter

Editor, WONDER STORIES:

The May issue has some vivid cover! The SCIENCE FICTION LEAGUE insignia was plenty colorful and attracted the eye at once. The space-ship portrayed on the April cover was a nice bit of painting.

"The Land of Mighty Insects" tied for first place with "The Menace from Space." They were two exceptionally fine stories. "The Last Planet" and "The Moon Devils" came next. "The End of the Universe" suggested to me the end of the story "The Man Who Awoke."

In the May issue, "Earthspot" was, in my opinion, the best complete story of the issue. I'm sorry to see that Epaminondas T. Snooks, D.T.G., is becoming sensible. Stories like his "Why the Heavens Fell" are what put the spice in science-fiction. "Druso" has all the appearances of a science classic. As yet I have not finished "Xandulu."

I have a question that you simply have to answer. Why is it that even though Jupiter is considered and practically proven to be in a molten state, yet you have published uncountable numbers of stories of Jovians?

Look forward in the near future to my application for the SCIENCE FICTION LEAGUE. Long live the S.F.L.!

DAVID A. KYLE,
Monticello, N. Y.

(Jupiter has not been proven to be in a molten state—and there are other theories more convincing. Many scientists today believe that it consists of a gas, though no one can tell just what is beneath its clouds until they reach there. There can very conceivably be land on the planet with a hollow core. Jovians will have to stand as something possible until someone disproves it.—EDITOR.)

A Budding Author

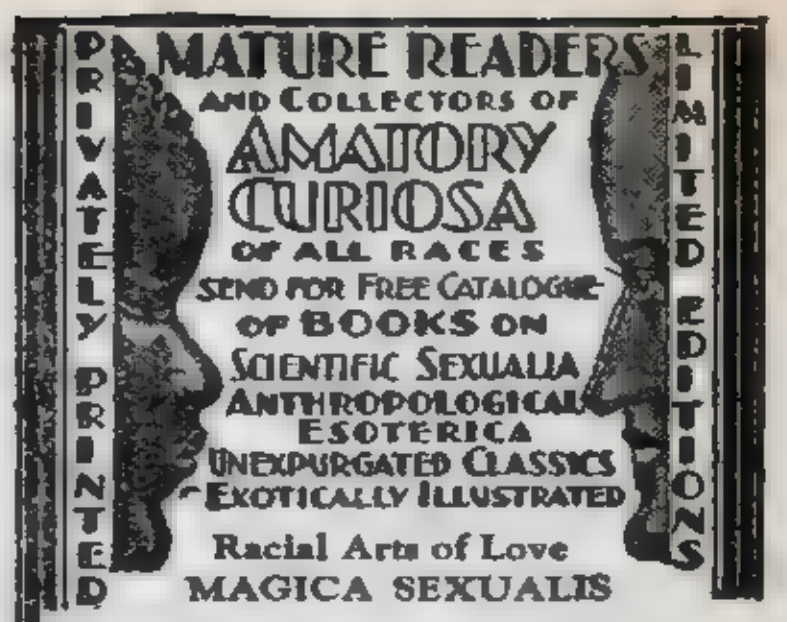
Editor, WONDER STORIES:

Although I am only seventeen, I have been reading WONDER STORIES and the other scientific-fiction for some years. I have a vivid imagination myself and it gives me a lot of pleasure to see the results of imagination in others.

I am planning to write myself. In fact, I'm going to send some manuscripts to this magazine. At present I am a junior at Brookline High, and am the managing editor of the school paper.

I have heard several people say that it is easy to write imaginative fiction of the WONDER STORIES type, but I find that it is harder, if anything, to write than most other kinds of prose. It must run along a fine line between pure, imaginative "bunk" and fact. Therefore I think the authors of scientific-fiction should be praised much more than they are at present by the average person.

(Continued on page 252)



All FALSTAFF anthropological books on the Love Relations of Mankind are enthralling, highly informative documents by authorities of international repute. That is why the FALSTAFF list of permanent subscribers reads like a "Who's Who" of

America's Sophisticated Intellectual Aristocracy

FALSTAFF PRESS
Dept. 2-WS, 230 Fifth Ave., New York, N.Y.
Please send me free illustrated catalogs of Amatory Curiosa.
Name .....*Age*
Address .....
City .....*State*.....

MAILING LISTS

Pave the way to more sales with actual names and addresses of Live prospects.

Get them from the original compilers of basic list information—up to date—accurate—guaranteed.

Tell us about your business. We'll help you find the prospects. No obligation for consultation service.

Gives counts and prices on 8,000 lines of business. Shows you how to get special lists by territories and line of business. Auto lists of [redacted]. Shows you how to use the mails to sell your products and services. Write today.

R. L. POLK & CO.
Polk Bldg.—Detroit, Mich.
Branches in Principal Cities
World's Largest City Directory Publishers
Mailing List Compilers. Business Statistics. Producers of Direct Mail Advertising.

SAVE 50% Write today for FREE Mail Order price list of Sanitary Necessities of all kinds for men and women. Goods sent in plain sealed envelope, postage paid by [redacted].
P.O. BOX 383 Dept. M-7 Hamilton, Ontario

$1,000 to $5,000
CASH
For a Few Pennies a Day!

Present Conditions Demand Greater Security for Home

The safety of our families and homes is continually in the minds of all of us in these times. The Union Mutual Life Company of Iowa gives you the one sure means of guaranteeing the necessities and comforts of life for your loved ones—sure, dependable financial help to fall back upon, no matter what happens.

Now, at last, you may BUY exactly the kind and amount of life insurance you NEED for the protection of your family, right in your own home, without high-pressure salesmanship and without medical examination or fees! Thus you will either SAVE all these costs, or you may BUY MORE PROTECTION for less premium!

The new history-making life insurance policy, issued exclusively by the Union Mutual Life Company of Iowa enables you to put every penny of your investment into PROTECTION for your loved ones—giving you the very MAXIMUM of dependable protection for lowest premiums, less all agents' commissions and medical fees!

Why not make up your mind RIGHT NOW to see for yourself exactly what MODERN life insurance means to you and your loved ones? Fill in and mail the coupon below. By return mail you will receive for FREE INSPECTION, one of the new Union Mutual Life policies, which, for only a few pennies a day, pays life insurance benefits of $1,000 and accident benefits of $5,000, including loan service, endowment additions, generous dividends, disability benefits and paid-up features. A standard, full-coverage legal reserve policy at nearly "net" cost.

Ask yourself this question, please: "Why shouldn't I profit by these remarkable new life insurance advantages which are created for my special benefit and service?"

Fill in the coupon below and mail today! No red tape—no medical examination and no agent will call. ACT TODAY! See the benefits of this remarkable new Union Mutual Life policy! Let us PROVE TO YOU, without one cent of expense or obligation to you that it is, indeed, the greatest life insurance offer ever made.

COUPON

Union Mutual Life Company *of Iowa*,
Dept. 218
Des Moines, Iowa.

Please send me one of your FREE policies to look over.

Name .....

Address .....

City ..... State .....

Fill in this coupon and mail today!

THE READER SPEAKS

(Continued from page 251)

You will probably find many things that are not right in my works, but I hope that you will read them over and let me know what I can do to improve them. At my age, of course, my style is changing and unsettled, but I have many years ahead in which to perfect it.

I feel that the most interesting stories are the "thought vibrant" ones. If, for instance, everyone should suddenly be able to see what was going to happen in the future . . . . what would happen? They might try to change it . . . . but they couldn't, because if they did, the future wouldn't be the same as that which they saw . . . . it gets complicated! But I think you see what I'm driving at. A story that sets one thinking, wondering; that is what people [illegible].

I have a great deal more that I would like to say . . . . . but you are undoubtedly a busy person. "Xanduiu" was an exceptionally well-written story, though a trifle too weirdly imaginative.

CHARLES OSGOOD,
Brookline, Mass.

(It has never been easy to write good science-fiction, and it is harder to write for WONDER STORIES now than it has ever been to write for any science-fiction magazine in the past. For almost a year now, we have been operating under our new policy which asks for, in particular, "short stories and novelettes propounding new, logical scientific theories with original plots." That is a large order and our authors realize it—that accounts for all the superior stories that have been published in WONDER STORIES lately.—EDITOR.)

Our Illustrations

Editor, WONDER STORIES:

After a long silence, may I once again speak, or rather write?

I haven't quite finished the March issue, but what I've read has been uniformly good.

Sterling's "exmultitemporaneous-constapulatory-superlativity-confuriolidosciousmesical" idiocy was not in the least, as you say, lexicographical. I enjoyed your introduction more than the story.

My dictionary doesn't have a couple of your words in it. I'd appreciate it if you would send me a large, cellophane-wrapped copy of Webster's. Or if that's too much trouble—just translate your English for all of [illegible].

Of course, I've read *The Reader Speaks* and I agree with C. H. Davis, Jr., that we need more stories on psychology and sociology. At first these seem to mean dry, uninteresting and statistical stories, but look at Doctor Keller's stories. His "Literary Corkscrew" was not what you'd call psychological but it dealt with the workings of the brain or nemo-psychiatry.

The "Man Who Awoke" series was an excellent example of the sociological type of story and I think all of the readers, without exception, liked it.

The average person, and most of us are just average people, knows little of these sciences and therefore we could all profit by studying these stories closely.

Vaughan's "Exile of the Skies" was excellent. Of course, there will—and must—be a sequel.

I like the idea of inserting those interesting news flashes, and also the poems—as long as they are not blank [illegible].

I don't like the small size and, I think, neither do you. It inevitably cheapens the appearance of the magazine. I am an idealist, an imaginative artist, and therefore I am not satisfied with the magazine. I dream of the day when your circulation permits you to publish a magazine like, well, say the *Delineator*—large size; clean cut; smooth, white paper; new, different printing; and many, many illustrations—and colored ones at that—inside

Illustrations interest me most. It is a well-known fact or axiom that an illustration, or things we can see, impresses us more than things we hear or read. That is why we enjoy science-fiction movies so much. So, nothing, I think, has more to do with putting a story across than a good illustration. A bad one can ruin a story for me.

Paul and Wesso will always remain, at least to the older (or rather, earlier) fans, as the aces of science-fiction illustrators. But Paul, of late, is ruining his

work with too much shadow. It gives his drawings a depressing atmosphere. Have you not noticed it? Winter, now, is different. His work is refreshing and light. His illustrations—due, I think, to his beautiful line work—are pleasing to the eye and compel you to read the story. Another trouble with Paul is the sketchiness of his work. I think you have given him too much work. He doesn't seem to have time to do it smoothly and completely. I'll bet he nearly works his hand off trying to finish his work in time for publication. However, his covers have stayed very nearly up to his standard.

We, the readers, appreciate the work of the new managing editor in improving the quality of the stories—which is becoming increasingly noticeable with each issue.

The editorials are always good as is the *Science Questions and Answers* department.

Well, may your magazine survive the War of the Worlds in 2076—in other words, continued success.

You've probably noticed that I used the expression, "I think" quite often in this letter. I don't want to seem egotistical or dogmatic. The fact remains—I *do* think—and quite often at that. But as with most liberal-minded people, my opinion today will most probably not be the same tomorrow.

CLAY FERGUSON, JR.,
Roanoke, Va.

(Several of the words used in the blurb to "The Brain-Eaters of Pluto" cannot be found in an unabridged dictionary. You will be pleased to note that Doctor Keller is back with us again and we have several of his stories on hand awaiting publication. You have submitted to us the most interesting criticism of our art work we have received to date. Your opinions and suggestions show careful observation. Many of our readers notice a change in Paul's work, though they claim it is for the better. —EDITOR.)

"The Literary Corkscrew"

Editor, WONDER STORIES:

I have just finished reading the March issue of WONDER STORIES. In my opinion, Dr. David H. Keller's "Literary Corkscrew" was the best story in that issue.

The new size suits me fine, but I can't say the same for the rough edges. Your new policy is fine—keep it up and you'll still be the best of your type of mag.

JAMES MOONEY,
New York City.

(Doctor Keller's stories always go over very well. We did not publish any of his stories for quite a while, but he is back with us again and you will see his material in WONDER STORIES at frequent intervals from now on.—EDITOR.)

From England

Editor, WONDER STORIES:

Until the beginning of 1932, I had never heard or thought of science-fiction. Then I saw the cover of the February, 1932, issue, depicting a scene from "The Moon Era." I had never seen anything like it before, and since that, my whole life has been totally different. I could never comprehend the size and immensity of the Universe, and I had never dreamed of time- or space-traveling. Also, by the way, I got wonderful inspiration for poetry. I understand far better now the structure of matter, many branches of physics, and my ideas of religion have vastly altered.

I think that if the millions who read science-fiction in the United States could come to England, they would give up the ghost when they became acquainted with the mind of the average person. Impossible as it may seem to you, there are a great number of people who cannot understand that almost every point of light that they see at night is a sun probably far larger than our own; who cannot believe that there are many other worlds like ours. I have actually been asked by several people who considered themselves

(Continued on page 254)

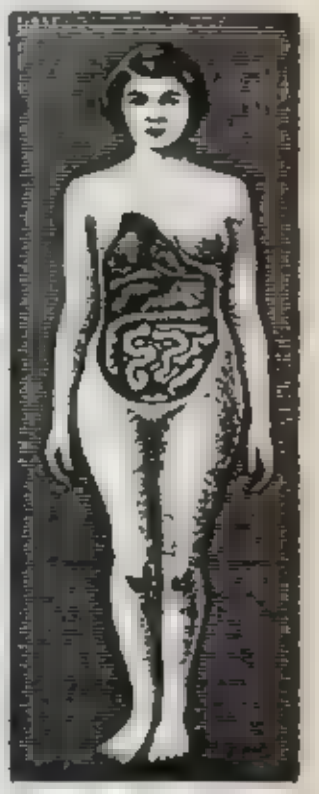
ANATOMICAL MANUAL

THE LIVING BODY
Male and Female

The Only Popular-Priced Anatomical Atlas Published

Only $2.00

A UNIQUE NEW MANUAL OF SECTIONAL ANATOMICAL CHARTS AND ILLUSTRATIONS PREPARED BY MEDICAL EXPERTS.
This new book shows the human body with each aspect of its structure in separate sections; the exact position of all organs, every bone, muscle, vein, artery, etc.



LIST OF PLATES

Plate I. Nude Adult Female
" II. Nude Adult Male
" III. Nervous System of Female
" IV. Skeletal System
" V. Muscular System (Posterior)
" VI. Muscular System (Anterior)
" VII. Vascular System
" VIII. Respiratory System
" IX. Digestive System
" X. Male Genital Organs in Detail
" XI. Female Genital Organs in Detail
" XII. Cross-Section of Pregnant Female Body with Child.

All plates (one foot high) are printed in actual natural colors.

Thus far, plates such as those presented here have been so high in price as to be inaccessible to the public. Our plan in producing these charts is to make them available to every adult person.

The book is 14 inches high and 9¾ inches wide, contains twelve full-page color plates and [illegible] illustrated with fifty photographs and drawings, made from actual photographs, and all organs and parts of the human body—male and female—are shown in great detail in natural colors.

Opposite each page, an explanatory text is provided, illustrated with photographs and drawings to show in detail the different organs and other features of the human body. The book is recommended for nurses, art students, for lawyers for use in litigations, lecturers, physical culturists, hospitals, [illegible], schools, colleges, gymnasiums, life insurance companies, employers' health departments, etc.

But every man and woman should own a copy of the ANATOMICAL MANUAL for effective knowledge of his or her own physical self!

It is of inestimable value to the prospective mother, because of the information it provides on the essential anatomical facts of pregnancy and the structure of the female genital organs.

Money Refunded If Not Satisfactory

MAIL COUPON TODAY!

GRENPARK COMPANY, Dept. WS-734
171 Franklin Street, New York, N. Y.

Gentlemen:—Enclosed find $2.00 (Foreign and [illegible] by International money order), in full payment for a copy of the ANATOMICAL MANUAL, as per your offer

Name .....

Address .....

City ..... State .....

THE SCIENCE FICTION SWAP COLUMN

A department for the buying, selling, and exchanging of fantastic literature. Rates 2c per word. No discounts. Cash should accompany all orders. Advertisements to appear in the August issue must be received not later than June 4th. Send all communications to WONDER STORIES, SWAP EDITOR, 99 Hudson St., New York, N. Y.

FOR SALE

BOOKS, Magazines; Scientific, Weird, etc. Lists 3c. Swanson-WS, Washburn, North Dakota.

"THE Kingdom of the Worm" by Clark Ashton Smith and "The Ancient Voice" by Eando Binder—never before published. Limited edition, ten cents each. Charles D. Hornig, 137 West Grand St., Elizabeth, N. J.

COMPLETE sets or single issues all science-fiction magazines. National Geographics to 1916. Send want list. Harry Boosel, 1523 East 55th, Chicago.

A. MERRITT'S latest story, "Last Poet and the Robots" and Dr. Keller's "The Dead Woman", both for 10c. Robert Scarlet, 87-36 162nd St., Jamaica, New York.

"HOW to Write a Science-Fiction Story" and "Celebrities I've Met"—information on science-fiction notables. Both for 10c. Charles D. Hornig, 137 West Grand St., Elizabeth, N. J.

STILL have a number of Amazing Stories Monthlies and Quarterlies, Wonder Stories Monthlies and Quarterlies, Astounding Stories, Weird Tales, and some miscellaneous scientifiction back to 1923 to dispose of at 10c a copy—all in excellent condition. Linus Hogenmiller, Farmington, Missouri.

SCIENCE fiction books and magazines for sale. Books by Cummings, Merritt, Wylie, Kline, Taine, Wells, and many other science-fiction writers. In magazines such classics as "The Blind Spot", "Into the Infinite", "The Girl of the Golden Atom", "The Moon Maiden", "After Worlds Collide", "The Fire People." Lowest prices; write for free list. Arthur Erreger, 595 Prospect Ave., Bronx, New York City.

PAMPHLET containing articles of interest to all science-fiction fans. "How to Collect Fantasy Fiction"—"Science Fiction in English Magazines" and dozens of items concerning science-fiction authors, stories, and general facts of interest. Only 10c. Charles D. Hornig, 137 West Grand St., Elizabeth, N. J.

WANTED

UNDAMAGED June 1930 Wonder. Rap. 3258 North 27th. Milwaukee, Wisconsin.

ISSUES of Weird Tales dated 1923-4-5 and some later. Also covers of some old Amazings. What do you want for them? Charles D. Hornig, 137 West Grand St., Elizabeth, N. J.

"THE Conquest of Mars" by Garrett P. Serviss. C. A. Brandt, 337 West 22nd Street, New York City, N. Y.

EXCHANGE

USE this section if you have any books or magazines that you would like to trade for others. All ads must refer to fantasy fiction.

TAINE *of* SAN FRANCISCO

Science Fiction's Best Detective

RE-APPEARS IN

"THE TREE OF EVIL"

by David H. Keller, M.D.

—watch for it!

THE READER SPEAKS

(Continued from page 258)

educated, *what would happen if a star fell upon the earth?* It makes me shudder to think of this in the twentieth century. The majority of people go about their lives thinking nothing of what is happening outside their particular sphere of life. I think that if science-fiction were read more broadly by the yeomen of England, they would think more sanely and clearly. Another thing that irritates me is this: a wonderful record flight is made (height or speed) and everyone says "How wonderful!"—"They'll go at a thousand miles an hour, some day." Then I say, "Yes, but petrol engines won't last forever; they'll find something more superior." Everyone: "What?" Then say I, "Jet propulsion or perhaps utilize the power of the atom." Then o'er their vacant dials there steals a look of disbelief mixed with a hurt look at the thought that petrol motors will ever be superseded. Of course, they have never heard of rocket experimenters except when there is news of a rocket that fails and then oh, the triumph and "There! I told you so!"

However, I am writing this for two reasons. Of course, one is to criticize the magazine. Firstly, let me sing a lament in adagio time that WONDER STORIES has shrunk in the wash or rather the depression (that's the reason, isn't it?). If you keep to the small size, could you cut the cover edge of the mag right up to the edge of the inside? This is the trouble with every small magazine. I notice you have the old picture back of a female sharing people out to the various planets on the contents page. About the only other point I can criticize unfavorably is the small space allowed for *The Reader Speaks*. One or two advertisements about Sane Sex Life are all right, but when it comes to eight columns of almost all sex-life books and six columns of letters, things need looking into. What about it, old boy?

Now, the stories. A few months ago, I just read the stories and forgot them. The fault lay, I think, in that you were drifting toward politics and the type of tale in which the two heroes have a ray-gun fight with some rebellious Martians and, of course, win. For myself, I don't care how little science there is in a story, so long as the plot is original. I enjoy bizarre stories, such as those dealing with synthetic life, e.g., "The Synthetic Entity." By the way, here is a point I am uncertain about. In the "Time Express," the passengers could not take anything with them into the future or bring anything back. Then how did their luggage travel? Personally, I don't believe in time-travel, except perhaps that suggested in "The Man Who Awoke." Space-travel, however, is merely a matter of time. (No pun intended.)

Following the common example, I will name some of the stories that I consider worthy of mention: "The Reign of the Robots," "The World of the Red Sun," "Brood of Helios," "The Time Conqueror," all of the "Brain" stories, "Tetrahedra of Space," "The Radio Terror" (what a contrast to "The Death of Iron" which was another French story)—the latter I consider the rottenest balderdash you have ever printed—"The Cosmic Horror," "Spheres of Death," "In the Year 8000," "Waves of Compulsion," which, sad to say, I have lost.

"Why the Heavens Fell" was a good story—only for its sheer idiocy. Before man ever thought of the Law of Inverse Squares, was not the earth the same as it is now? Therefore, why should it be different if the law be repealed? Pardon my asking such a question, but is E. T. Snooks by any chance one of the editors? If so, then WONDER STORIES is going to be one reader short. I think it would be a good idea if, once in a while, you published a reincarnation story; a sensible ghost tale. One or two semi-science-fiction magazines print some excellent ones.

If ye ed reads through all this, then he has more patience than he says he has in comments on letters.

ADAM BOYAGE,
Essex, England.

(You seem to think that there are fewer people of the type you mention in your second paragraph in America than in your country. Human nature is the same all over. The average person in this country is just as incredulous as in England. We say that such people "can see no farther than their noses." We

have always believed that skepticism is a great drawback to civilization and progress.

We did not reduce our magazine to the small size because of the depression. We did it because a magazine of this format sells more readily. It costs just about as much, if not more to make the change.

Of course, the repealing of the Law of Inverse Squares in "Why the Heavens Fell" was a farce and not to be taken seriously. It was one of our first burlesques on science-fiction. "The End of Tyme" and "The Brain-Eaters of Plato" were others of this type.

WONDER STORIES is a magazine of logical science-fiction and we could not publish ghost stories because they are not logical nor scientific. However, we believe that a good science-fiction story with a weird or terrifying atmosphere is not out of place occasionally. These scientific-weird stories, such as "The Tomb From Beyond" and "Caverns of Horror" were quite a success and we are planning others. A pure weird tale, though, has no place in a magazine of our type.—EDITOR.)

To Factfinders

Editor, WONDER STORIES:

I have always been a silent reader but I have finally decided to come out in the open and do some talking. This letter is for some of the readers as well as for you, Editor.

To begin with, I will say that "The Exile of the Skies" is the best science-fiction story that I have ever read. Any more of that type of story will be welcomed. "Xandulu" so far is very good, but it is, I think, too fantastic.

Now to some of you readers. I have been reading "The Reader Speaks" in every issue and I see that many of you pick a story to pieces and try to point out the smallest error in some scientific calculation or something. We know that you are just trying to show how smart you are. Of course this does not apply to all. A person would think you were some superscientist. I hope no feelings were hurt in that, but consider the editor when you point out some small mistake to him. Nuff sed.

As for me, I think "our" mag is the best there is and the only improvement I can think of is to have more illustrations. Oh, yes, cut the edges smooth.

Yours for more good stories and success,

DAVID BOWEN,
Oil City, Pa.

(We do not believe that those of our readers who find minor faults with our stories inform us of them just to show how smart they are. They really want to improve the magazine, and we appreciate their attention. We have profited more than once by helpful suggestions and criticisms put forth by them.—EDITOR.)

SEXOLOGY

THE MAGAZINE OF SEX SCIENCE

Edited by DR. DAVID H. KELLER

SEXOLOGY, foremost educational sex magazine, is written in simple language and can be read by every member of the family. It is instructive, enlightening—not a risque book—contains no jargon. Devoted to Science of Health Hygiene.

Contains 25 important articles on Sex Science, 68 pages, with attractive two-color cover. Here are a few of the more important articles.

Editorial—"Sex Inventions"; Popular Mistakes About Sex (Illustrated); Males Made to Give Milk; Methods of Escape; "Blue Babies" (Illustrated); Posture and Menstrual Pain (Illustrated); Inflammation of the Vulva; Is Frigidity Curable?; Mechanics of Male Anatomy (Illustrated); Sex Mystery of Queen Elizabeth (Illustrated); A Rabbit With Two Mothers; Sex Impulses of the Young (Illustrated); Menstrual Poison (Illustrated); Cost of Venereal Disease; Infantile Sex Organs; Sex Life of the Criminal.

Get a copy of SEXOLOGY on any newsstand, or if your dealer cannot supply you, send 25c in stamps for a copy of the current issue.

SEXOLOGY 171T Franklin Street New York, N. Y.

How *You* Can MAKE MONEY *At Home!*

Substantially bound —146 pages of priceless information.

If you are a victim (man or woman) of the recent economic depression—or a woman who wants to add to the family income—or a man or woman beyond middle age and dependant upon others—or a recent college graduate not yet located—or a student wondering how to earn your year's tuition—or a boy or girl desirous of turning your spare time into money—**no matter who you are, if you have exhausted your resources and must earn money—this book will prove a sound and helpful guide to you.**

The 1,000 practical, money-making plans outlined in its pages were not created out of the imagination. They are true reports of what thousands of people are actually doing at the present time to earn extra money. The plans have been tried, and have been found practical, successful and profitable.

Authentic Sources

Says the author regarding this remarkable and timely work—"Exhaustive and painstaking research was necessary to obtain the 1,000 money-making suggestions comprising this book. Every available source was tapped. Special thanks and acknowledgment is extended to the U. S. Department of Labor, the Bureau of Home Economics, the Children's Bureau, the Office of Education, the Department of Agriculture, the Department of the Interior, the Congressional Library, and the Superintendent of the United States Government Printing Office for supplying the writer with all available documents, bulletins and publications."

Written to fill an immediate and pressing need, this exhaustive compilation and description of over one thousand ways to turn spare time into money is now available to everyone needing it. No matter what your state or condition, age or sex, it will offer at least one and probably many suggestions which you may be able to turn quickly into money. It has been priced so as to be within the reach of all—$1.00 postpaid in the United States and Canada—to foreign countries, $1.25. Order today before the supply is exhausted.

GRENPARK COMPANY

171 Franklin St., New York, N. Y.

Use the Coupon Today

Grenpark Company,
171 Franklin St., New York, N. Y., Dept. WS

I enclose $1.00 for which please send me a copy of 1,000 Money Making Ideas. I understand that my money will be refunded if the book does not prove entirely satisfactory. (Enclose $1.25 from countries other than U. S. and Canada.)

Name .....

Street .....

Town ..... State .....

Blank Cartridge Pistol

REVOLVER STYLE

.22 CAL.

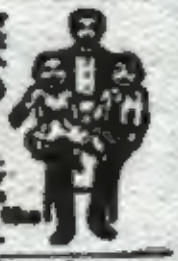
25c
50c
$1.00

BOYS! THROW YOUR VOICE

Into a trunk, under the bed or anywhere. Lots of fun fooling teacher, policeman or friends.

THE VENTRILO

a little instrument, fits in the mouth out of sight, used with above for Bird Calls, etc. Anyone can use it. Never fails. A 16-page course on Ventriloquism together with the Ventrilo. All for 10c postpaid.



Subscribe to our Monthly Magazine

Fun, Magic and Mystery

We also publish a monthly magazine of FUN, MAGIC AND MYSTERY. Each issue contains a big collection of parlor magic, tricks with cards, fortune-telling, funny readings, amusing experiments, money-making secrets, jokes, riddles, conundrums, parlor entertainments, puzzles, problems, science, mechanics, etc. In addition it will list all the latest novelties, tricks, puzzles, etc. Because it is really a magazine and catalog combined, we have fixed the subscription price at ONLY 10c per year, or 3 years for 25c. This so you readily see does not even cover our mailing expenses, let alone the cost of getting up the magazine. Try this magazine for one year.

Novelty French Photo Ring

Here is a very great novelty in Rings, that is selling in thousands. It is a steel mosaic ring, finished in imitation platinum, and set with a large imitation diamond. It looks just like an ordinary ring, but in the shank of the ring is a small microscopic picture almost invisible to the naked eye, yet is magnified to an almost incredible degree and with astonishing clearness. There is quite an assortment of pictures that should suit all tastes. Some are pictures of bathing girl beauties, lovely French Actresses, etc., others are views of places of interest in France, Panama Canal and elsewhere, others show the Lord's Prayer in type, every word of which can be read by persons with normal eyesight. They are legitimate without being in any way objectionable. PRICE 25c, 3 for 60c, or $2.25 per doz. postpaid. *Big 3 page Catalog 10c.*

REAL LIVE PET TURTLES

25c

Sent by Mail for only 25 Cents

LIVE Delivery Guaranteed

If you want a fascinating and interesting little pet, just risk 25c and we will send you a real live PET TURTLE by mail postpaid. Thousands sold at Chicago World's Fair. No trouble at all to keep. Just give it a little lettuce or cabbage or let it seek its own food. Extremely gentle, easily kept and live for years and years. Need less attention than any other pet. Get one or more. Study their habits. You will find them extremely interesting. Price 25c. SPECIAL TURTLE FOOD 25c pkg.

THE FAN DANCE

HIT of the CENTURY of PROGRESS

Who will forget the famous FAN DANCE episode of the Century of Progress Exposition in Chicago? Here it is humorously, cleanly presented in vest pocket form. You flip the pages and **HOTSY TOTSY** comes to life and whirls through her dance, provoking not a sly smile, but a wholesome laugh from all, even the most fastidious. It is a most innocent fun maker that will cause you and your friends no end of fun and amusement. **HOTSY TOTSY the FAN DANCER** measures only 2 x 3 inches – 6 square inches of spicy, piquant entertainment for one and all. **PRICE 10c postpaid.** 710 page catalog of novelties, jokes, etc., **10c.** *Johnson Smith & Co., Dept. 946, Racine, Wis.*

MAKE YOUR OWN RADIO RECEIVING SET

SILENT DEFENDER

Used by the Police officers, detectives, guards, night watchmen and others as a means of self-protection. Very effective. Easily fits the hand, the finger being grasped in the four holes. Very useful in an emergency. Made of aluminum they are very light, weighing less than 2 ounces. Handy pocket size always ready for instant use. PRICE 25c each, 2 for 45c postpaid.

HOW TO WIN AT POKER

Written by a card shark. Tells how to win at draw poker. Explains different variations of poker such as Straight Poker, Stud Poker, Whisper Poker, Blind Draw, The Progressive, The Widow, Black Jack, Pinochle, etc. Exposes the methods used by card sharps and professional gamblers. 15 Chapters. This book contains a vast amount of information and may save you many times the price charged for it. Bound in cloth. PRICE 10c postpaid. *710 page Novelty Catalog 10c.*

250 MAGIC TRICKS

An excellent little book containing 250 Parlor tricks, tricks with cards, coins, handkerchiefs, eggs, rings, glasses, etc. So simple that a child can perform them. Profusely illustrated. Price Postpaid 10c; 2 copies 25c

Wonderful X-Ray Tube

A wonderful little instrument producing optical illusions both fascinating and startling. With it you can see what is apparently the bones of your fingers, the heart in a label pencil, the interior opening in a pipe stem, and many other similar illusions. Price 10c, 3 for 25c.

Electric Telegraph Set 15c

BOYS! A private Electric Telegraph Set of your own for 15c. Lots of fun sending messages to your friends. Better still get two sets, hook them up as shown in the directions, for TWO-WAY MESSAGES (sending and receiving.) No trouble at all to operate with the simple instructions that accompany each set. Operates on any standard dry battery obtainable everywhere. With this outfit you can learn to transmit and receive by the Morse International Code, and in a very short time become an expert operator. Mounted on a wooden base measuring 4 x 5 in., first class construction throughout, complete with key, sounder, magnet, miniature Western Union blanks, packed in a neat box with full illustrated instructions. ALL FOR 15c (without Battery) 710 page catalog of novelties, jokes, puzzles, tricks, etc. 10c

The Boy Electrician 10c

NEW VAMPING CARD 15c

NO TEACHER NEEDED — Surprisingly Simple System. Persons having unlimited their Musical Education need not despair, for with the aid of our new VAMPING CARD (placing the card upright over the piano keys), you can Vamp your way to thousands of Songs in Ballads, Waltzes, Rag Time, etc., and knowledge of music is required. After using it a few times, you will be able to dispense with the aid of the Vamping Card entirely. This clever invention costs only 15c postpaid.

BIG ENTERTAINER 15c

326 Jokes and Riddles, 25 Magic Tricks, 10 Parlor Games, 12 Toasts, 13 Fairy Tales, 14 Money-making Secrets, 22 Monologues, 21 Puzzles and Problems, 9 Comic Recitations, 10 Funny Readings, 11 Parlor Pastimes, 19 Flirtations, 1110 Girls' and Boys' Names and their Meanings, 16 Picture Puzzles, 32 Amusing Rhymes, 27 Amusing Experiments, Deaf and Dumb Alphabet, Shadowgraphy, Gypsy Fortune Teller, How to tell Fortunes with Cards, Dice, Dominoes, Crystal, Coffee Cup, etc., Hypnotism, Ventriloquism, Cut-outs for Checkers and Chess, Dominoes, Fox and Geese, 9 Men Morris, Spanish Prison Puzzle, Game of Anagrams, 25 Card Tricks, Crystal Gazing, etc. ALL FOR 15c

TELL YOUR OWN FORTUNE

With the aid of the deck here illustrated, you can tell your own fortune. Tell you the lucky days, the unlucky days, your lucky numbers, your lucky colors, your lucky stones, your lucky flowers, your lucky birthstone, your lucky month, your lucky year, your lucky number, your lucky color, your lucky stone, your lucky flower

The THIRD SEX! Man or Woman?

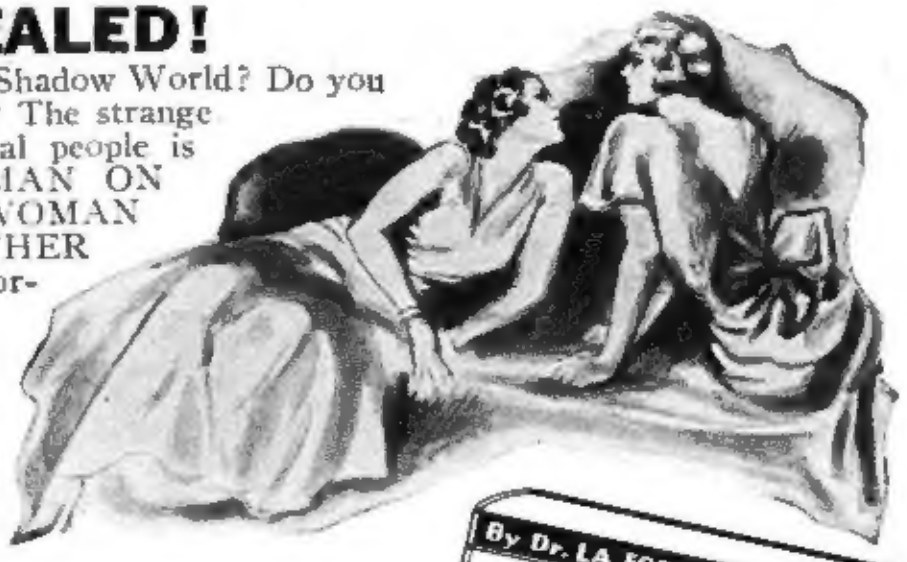
For hundreds of years men and women have talked with hushed voices about "STRANGE PEOPLE"—men who are not men—women who are not women. No one has ever *dared* to talk out in the open about it. Is it any wonder that the shocking, lurid facts of this great social evil are unknown to the great mass of men and women? Is it any wonder that strange nick-names are commonly used to describe these creatures.

A DOCTOR CASTS THE LIGHT OF TRUTH ON THE STRANGE, EXOTIC WORLD OF TWILIGHT MEN AND WOMEN!

Now a Doctor has dared to tear away the veil of mystery. In blunt, understandable words he describes the unbelievable facts. "STRANGE LOVES," A Study in Sexual Abnormalities, by Dr. La Forest Potter, noted authority, is a document so weird, so startling, as to amaze the civilized world. Dr. La Forest Potter, the author, is a late member of the New York County Medical Society, Massachusetts Medical Society, Boston Gynecological Society, Associate Professor of Rhinology, Laryngology, and Otology, New York School of Clinical Medicine, and the author of many well known works.

THE TRUTH REVEALED!

Can you distinguish these men and women of the Shadow World? Do you know that their number is constantly increasing? The strange power these men and women wield over normal people is almost unbelievable. Dr. Potter says, "NO MAN ON EARTH HAS A CHANCE AGAINST A WOMAN ONCE SHE HAS SUCCUMBED TO ANOTHER WOMAN." Actual clinical cases reveal the abnormal ties and the unnatural desires and erotic reactions of these twilight men and women! There are records that actually prove that men have been MADE INTO ABNORMALS. A startling, provocative indictment against the false modesty that has been responsible for the growth of these fantastic, strange amatory curiosities among savage and civilized races.



STRANGE LOVE

Dr. Potter tells about the hidden, secret passions that dominate these women's exotic lives. He talks about the tragic duality of the effeminate man—half man—half woman. He delves deep into the ages—relates the bestialities and savageries practiced by the old Egyptians, Hindoos, Greeks, Assyrians and Romans—the sensuality that was ascribed even to the Greek Gods, to Zeus, Apollo, Hercules and Jupiter—the growth through history from ancient countries to France—to Germany—to its tremendous spread through the United States.

MUST THESE SUBJECTS BE CLOTHED IN SILENCE FOREVER?

Fearlessly, openly, the meaning of many misunderstood subjects is brought under the searchlight of truth. Sadism—Necrophilia—Phallic Worship—Sodomy—Pederasty—Tribadism—Saphism—Uranism—the normal man and woman will refuse to believe that such abnormalities exist and have been practiced through the ages.

ASTONISHING DISCLOSURES ABOUT THE WORLD'S MOST FAMOUS MEN

How many of the famous men of history were considered "odd"? Socrates, Plato, Caesar, Virgil, Oscar Wilde, Leonardo da Vinci, Lord Byron, Tchaikowsky, the musician, Walt Whitman, the gentle, lovable poet, Napoleon—men and women of all kinds in all stages of life.

FOR MATURE, SOPHISTICATED READERS OF THIS MAGAZINE!

This document in book form contains bewildering disclosures and discoveries of a subject that is seldom if ever discussed, that most people know little or nothing about—yet one that deserves the most painstaking and thorough investigation. A limited edition has been prepared for ADULTS ONLY. 256 pages, beautifully bound in cloth, printed on fine paper—for the book lover and collector of rare, esoteric literature. Reserve a copy of this book—the most startling document of its kind—by mailing the coupon.

GRENPARK COMPANY
245 Greenwich Street Dept. WS New York, N. Y.

GRENPARK COMPANY
Dept. WS, 245 Greenwich St., New York, N.Y.

Please send me IN PLAIN WRAPPER a copy of the original edition of Dr. La Forest Potter's book "STRANGE LOVES" — A study in Sexual Abnormality. I hereby affirm that I am an adult person.

[ ] I am enclosing remittance of $2.00. Send book all charges postpaid.

[ ] Ship C.O.D. I promise to pay postman $2.00 plus postage on delivery.

Name .....

Address .....

Town ..... State .....

(We reserve the right to return all orders after this edition is exhausted. Prepaid orders receive preference and will be shipped before C.O.D. orders.) (Canadian and Foreign orders must be accompanied by remittance for $2.25.)

FREE CIGAR CASE

Handsome Pocket Cigar Case Included FREE with "Get Acquainted" Orders.

Lord Edwin Ambassador Regular 30c One of Our 100 Nationally Advertised Brands

FRESH HAND-MADE CIGARS 3¢ Ea.

Only 3c each for the Factory-Fresh Hand-Made Cigars representing 50 of the 100 brands we manufacture, up to the 30c HAVANA Cigars. Absolutely fresh, deliciously fragrant. None shorter than 5 inches and most of them longer.

50 FRESH CIGARS IN A METAL HUMIDOR $1.50 POST-PAID

YOUR MONEY BACK
and the smokes are on us!

If you do not receive, IN YOUR OWN OPINION, at least $5 worth of smoking pleasure from these 50 assorted cigars, tell us frankly, and we will refund every penny of your money—and the smokes will have been on us!

HERE'S THE SECRET! Our inspectors put these cigars aside for slight color variations, etc. (unnoticeable to the eye of any but an expert!) but we guarantee, on a Money Back Basis, that you can smoke and enjoy every one of these 50 cigars just as though you had paid the full retail price.

DELIVERED FREE TO ANY PART OF THE U. S. (we pay postage). Send check or money-order for $1.50 or pay the postman when these cigars reach you. We have been making fine HAVANA CIGARS for over 50 years. References: Dun-Bradstreet or any bank in U. S. or Cuba.

Our Money Back Guarantee Protects You!

EDWIN CIGAR CO.
2338-J—Third Ave., New York, N. Y.